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# Manitoba

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January 2006

TO: Chairs of School Boards
Superintendents of Education
Principals of Schools (Kindergarten to Senior 4)
Presidents of Advisory Councils for School Leadership/Parent Councils (Kindergarten to Senior 4 Schools)
First Nations Education Authorities

Dear Colleagues:

**RE: *Rethinking Classroom Assessment with Purpose in Mind:***
***Assessment for Learning, Assessment as Learning, Assessment of Learning***

Manitoba Education, Citizenship and Youth is pleased to present *Rethinking Classroom Assessment with Purpose in Mind: Assessment for Learning, Assessment as Learning, Assessment of Learning*. This curriculum-based support document is intended to inform discussion among educators regarding the effective use of assessment processes to facilitate learning for all students.

This document was produced as a joint effort of the western provinces and territories (Alberta, British Columbia, Manitoba, Northwest Territories, Nunavut, Saskatchewan, and Yukon Territory) under the framework of the Western and Northern Canadian Protocol for Collaboration in Education (WNCP). The purpose of the project and resulting document was to capture some current thinking regarding educational assessment practices as they relate to improving student achievement. This initiative was accomplished through extensive collaboration and content review among a broad range of educators throughout the WNCP jurisdictions who benefited from the expertise of lead writer Dr. Lorna Earl.

The enclosed version of *Rethinking Classroom Assessment with Purpose in Mind*, produced by Manitoba Education, Citizenship and Youth, is intended to provide a framework for extending thinking, to confirm and to guide changes in effective assessment practices, and to foster professional learning. The document contains highlights from current research, descriptions of assessment processes that enhance learning, case studies from classrooms, and suggestions for professional dialogue and collaboration.

Manitoba Education, Citizenship and Youth is committed to fostering discussion and developing practical applications of current thinking in assessment. In the spring of 2005, the Department sponsored participation of divisional representatives in a conference on assessment, featuring Dr. Rick Stiggins. The Department also conducted a 2005 summer institute on assessment. In addition, the Department is supporting formative assessment practices through the new Middle Years reporting policy (currently in the pilot stage), and departmental staff regularly meet with and provide in-service support to Manitoba schools and school divisions. Support will continue in the coming months with sessions for educators, drawing from *Rethinking Classroom Assessment with Purpose in Mind* and other pertinent resources. Announcements regarding these sessions are forthcoming.

.../2

A limited number of additional copies of *Rethinking Classroom Assessment with Purpose in Mind* will be available until March 10, 2006, from:

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The Manitoba document is also available on the Manitoba Education, Citizenship and Youth website at: <http://www.edu.gov.mb.ca/ks4/assess/index.html>. The WNCP document is available at: <http://www.wncp.ca>.

Please send any extra copies of *Rethinking Classroom Assessment with Purpose in Mind* to your school division office for redistribution to schools that require additional copies. Alternatively, please contact Marci Collins regarding any extra copies and she will arrange for their return to Manitoba Education, Citizenship and Youth.

Inquiries related to the content of this document may be referred to:

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We look forward to collaborating with educators in our ongoing commitment to improving learning outcomes for all students, and trust that *Rethinking Classroom Assessment with Purpose in Mind*, with the activities and conversations it helps to support, will represent a positive contribution. We welcome your comments and invite you to complete the attached feedback form. Please return it to my attention (fax: 204-945-5060).

Yours sincerely,

Diane Cooley

Diane Cooley
A/Director
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# Feedback Form

Manitoba Education, Citizenship and Youth welcomes your response to the enclosed document and invites you to complete and return this feedback form.

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Manitoba
Building for the Future

# Rethinking Classroom Assessment with Purpose in Mind

Assessment *for* Learning
Assessment *as* Learning
Assessment *of* Learning

*Building for the Future*

# Rethinking Classroom Assessment with Purpose in Mind

Assessment *for* Learning
Assessment *as* Learning
Assessment *of* Learning

2006
Manitoba Education, Citizenship and Youth

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Every effort has been made to acknowledge original sources and to comply with copyright law. If cases are identified where this has not been done, please notify Manitoba Education, Citizenship and Youth. Errors or omissions will be corrected in a future edition.

This print resource is also available on the Manitoba Education, Citizenship and Youth website: <http://www.edu.gov.mb.ca/ks4/assess/index.html>

# Acknowledgements

This document has been developed by Dr. Lorna Earl and Dr. Steven Katz from Aporia Consulting, in collaboration with the Western and Northern Canadian Protocol for Collaboration in Education (WNCP) assessment team, which is made up of representatives from each of the member provinces and territories. Writing this guide has been a collaborative process, with WNCP team members sharing in shaping the document, developing the ideas, and locating examples from within their own jurisdictions.

WNCP Partners:

Alberta Education
British Columbia Education
Manitoba Education, Citizenship and Youth
Northwest Territories Education, Culture, and Employment
Nunavut Department of Education
Saskatchewan Learning
Yukon Education

# Foreword

Classroom-based assessment has tremendous potential to enhance student learning. When assessment is designed with purpose in mind, learning for all students can improve. Manitoba Education, Citizenship and Youth is proud to have collaborated with its partners in the Western and Northern Canadian Protocol for Collaboration in Education (WNCP) in developing this classroom-based assessment document.

As implied in the title, *Rethinking Classroom Assessment with Purpose in Mind*, identifying the purpose of any assessment is critical for its effective use. This document identifies three purposes of classroom assessment: assessment *for* learning, assessment *as* learning, and assessment *of* learning.

Some readers may be more familiar with frameworks that use only two categories: assessment *for* learning and assessment *of* learning. In those frameworks, the category of assessment *for* learning would include ideas related to both the assessment *for* and assessment *as* learning categories described in this document. The category of assessment *as* learning is included in *Rethinking Classroom Assessment with Purpose in Mind* to highlight the importance of the self-monitoring processes students use during learning, which have great potential to empower learners and foster ongoing learning.

*Rethinking Classroom Assessment with Purpose in Mind* is intended to provide a framework for extending thinking, to confirm and to guide changes in effective assessment practices, and to foster professional learning. While this resource offers some common vocabulary for assessment, its focus is on ideas, rather than labels, that teachers can reflect on, discuss, and try out in classrooms. The document contains highlights from current research, descriptions of assessment processes that enhance learning, case studies from classrooms, and suggestions for professional dialogue and collaboration.

Readers are invited to consider *Rethinking Classroom Assessment with Purpose in Mind* in relation to their personal practice, as well as to engage with colleagues, students, and the community in planning for assessment that best promotes student learning.

# Table of Contents


**Acknowledgements** iii

**Foreword** iv

**Introduction** vii

**Section I: Setting the Stage** 1

**Chapter 1: Why Change Classroom Assessment?** 3

Classroom Assessment and Societal Change 4

The Effects of Classroom Assessment on Learning 5

Classroom Assessment and Its Effects on Motivation 6

Using Classroom Assessment for Differentiating Learning 7

Quality in Classroom Assessment 8

**Chapter 2: Purposes of Classroom Assessment** 13

Balance and Tensions in Assessment Purposes 14

Planning the Assessment Process 15

Reporting 16

Assessment Tool Kit 16

A Vignette of Assessment in Action 18

**Section II: Three Purposes of Assessment** 27

**Chapter 3: Assessment *for* Learning** 29

What Is Assessment *for* Learning? 29

Teachers' Roles in Assessment *for* Learning 29

Planning Assessment *for* Learning 30

An Example of Assessment *for* Learning 35

Summary of Planning Assessment *for* Learning 39

**Chapter 4: Assessment *as* Learning** 41

What Is Assessment *as* Learning? 41

Teachers' Roles in Assessment *as* Learning 42

Planning Assessment *as* Learning 44
An Example of Assessment *as* Learning 50
Summary of Planning Assessment *as* Learning 54

**Chapter 5: Assessment *of* Learning** 55
What Is Assessment *of* Learning? 55
Teachers' Roles in Assessment *of* Learning 55
Planning Assessment *of* Learning 56
An Example of Assessment *of* Learning 61
Summary of Planning Assessment *of* Learning 65

**Section III: Next Steps** 67

**Chapter 6: Embedding and Sustaining Purposeful Classroom Assessment** 69
Understanding and Motivation 70
Capacity: Knowledge and Skills 71
Leadership 72
School and Community Support for Change 73
Nurturing Inquiry Habits of Mind 73

**Chapter 7: Building Capacity for Enhancing Classroom Assessment** 75
Professional Learning 75
Leadership and Support 77
Engaging Parents and Community 79

**Appendix 1: Template for Planning Assessment** 82

**Appendix 2: Overview of Planning Assessment** 85

**Resources for Further Reading** 87

**Works Cited** 95

# Introduction

With the goal of enhancing student learning, *Rethinking Classroom Assessment with Purpose in Mind* is designed to support teachers in assessing their students effectively, efficiently, and fairly, and to serve as a basis for designing professional learning. It has been produced by the Western and Northern Canadian Protocol for Collaboration in Education (WNCP), a partnership of provinces and territories[1] with a mandate to provide quality education for all students from Kindergarten to Grade 12 through collaboration in educational programs and services. Each province and territory in the WNCP will use the document within its unique circumstances, and will develop local implementation plans and supports.

It is important to note that *Rethinking Classroom Assessment with Purpose in Mind* is concerned with classroom assessment, not large-scale assessment. All of the provinces and territories in WNCP are engaged in one kind of large-scale assessment program or another, and some share resources. Large-scale assessment plays a useful and important role in providing system-level feedback. It is a complement to, and not a substitute for, classroom assessment. This document focusses on the kind of assessment that is an integral part of regular activity in every classroom, every day. It is designed to provide a framework for thinking as teachers, administrators, and professional developers work together over time in developing and using assessment in their classrooms to differentiate and facilitate learning for all students.

> We are not arguing that one assessment approach is good and another bad: the key issue is around fitness for purpose.
>
> (Gipps and Cumming, *Assessing Literacies*)

In recent years, each of the provinces and territories in the WNCP has recognized the power of assessment for student learning in statements that reinforce a focus on assessment for enhancing learning for all students.

1. Alberta, British Columbia, Manitoba, Northwest Territories, Nunavut, Saskatchewan, and the Yukon Territory.

**Yukon**

The Yukon Department of Education, working with parents and community, strives to develop the whole child . . . and provide an education appropriate to the individual learner. Classroom assessment plays a crucial role in this goal of assessing the continuous educational needs and progress of students to direct the teaching and differentiated learning within the classroom. The Department encourage[s] independent self-assessors in the quest for life-long learning. (Yukon Department of Education, 2004)

**Northwest Territories**

Schools are extensions of the cultures and languages of the communities they serve, and involve the community in the education of their children. In this context, assessment:

- must reflect the vision, the values, and the goals of the community;
- is an integral part of all teaching and learning processes in the school, at home, and in the community;
- is based on the educational needs of all students; and
- measures growth with respect to specific learning outcomes.

(Northwest Territories Education, Culture and Employment, 2001)

**Nunavut**

If students are to successfully move on to the next stage, it is important to build into the learning environment reflection, self-assessment and correction. (Nunavut Department of Education, 2000)

**British Columbia**

Teachers use assessment and evaluation information to

- provide students and parents with ongoing feedback;
- plan further instructional and learning activities;
- set subsequent learning goals;
- identify students who may require intervention.

(British Columbia Ministry of Education, 2004)

**Alberta**

Assessment, evaluation and communication of student achievement and growth are essential parts of the teaching and learning process. Each part of the teaching and learning process should be a positive experience for students and promote personal growth. Practices should be carried out in such a way that they support continuous learning and development. (Alberta Learning, 2003)

**Saskatchewan**

Evaluation should be an integral part of the teaching-learning process. . . . be a planned, continuous activity . . . [that] reflect[s] the intended outcomes of the curriculum. . . . assist[s] teachers in meeting individual needs and encourag[es] active participation and student self-appraisal to foster life-long learning. (Saskatchewan Education, 1991)

**Manitoba**

The ultimate goal of assessment is to help develop independent, life-long learners who regularly monitor and assess their own progress. (Manitoba Education and Youth, 2003)

Although this document includes many examples, it is not a collection of assessment tools for teachers to "mix and match." Instead, it provides a framework for thinking about the purposes of assessment, and for creating and implementing changes to teachers' assessment practices that are consistent with enhancing learning for all students. The notion of a *framework for thinking* is an important one; *rethinking classroom assessment* is about thinking first and doing second. *Rethinking Classroom Assessment with Purpose in Mind* is designed to give teachers an opportunity to both confirm and extend their learning.

*Rethinking Classroom Assessment with Purpose in Mind* is premised on the belief that assessment has various purposes, and that it is important to intentionally design and use classroom assessment methods to serve the intended purposes. This is not a step-by-step process. Instead, it depends on routine attention to the intended purposes. Changing assessment will require new individual and collective capacity for teachers, administrators, and even students.

This document is written to provide educators with starting points for reflection, deliberation, discussion, and learning. Suggestions for reflection are posted in the margins throughout the text, and can be used as discussion prompts for study groups and other professional learning contexts. Resources that might be of interest to particular readers are included in the margins throughout the text, and there is a list of resources for additional reading at the end of the document. Concepts are presented in margin boxes, and examples appear throughout, showing what some of the ideas presented might look like in practice.

This document is organized into three sections:

I **Setting the Stage** provides background information about why assessment has moved recently to the forefront, and why it is important for educators in all positions to understand both the changes that are occurring in assessment and the implications of these changes for policy and practice. It includes an outline of three purposes of classroom assessment and a vignette, which shows all three in action.

II **Three Purposes of Assessment** provides a detailed description of the three purposes of assessment that form the framework for thinking about how to select or develop assessment tasks, how to use them, and how to communicate about them with students, parents, and others: assessment *for* learning; assessment *as* learning; and assessment *of* learning. Case examples from teachers in WNCP territories and provinces are included in each of the chapters of this section.

III **Next Steps** suggests that rethinking assessment is a process of reflection, analysis, deliberation, and new learning for educators. This process involves building individual and collective capacity, and can be fostered at the level of the school, the district or division, and the province or territory. This section suggests ways that educators might engage in this process.

*Reflection:*

*As you read this document, think about how you could apply the ideas to your own assessment practices.*

# Setting the Stage

Section I

The current focus on classroom assessment comes out of changes that have been occurring over many years, in particular during the last decade of educational reform in teaching and learning. Section I of this document provides a context in which to understand these changes, particularly social and historical changes. It also examines how classroom assessment is used for multiple purposes, with special attention to the role of differentiated learning.

## Key Ideas in Section I

- Classroom assessment practices are deeply rooted in societal expectations.
- Classroom assessment plays a major role in how students learn, their motivation to learn, and how teachers teach.
- Quality issues (reliability, reference points, validity, and record-keeping) are important in any classroom assessment.
- Identifying the purpose of any classroom assessment is critical for it to be productive and efficient.
- Planning classroom assessment based on purpose ensures that it will be coherent and effective.
- Teachers can use many different strategies and tools for classroom assessment, and can adapt them to suit the purpose and the needs of individual students.

# Chapter 1

# Why Change Classroom Assessment?

As society changes, educators find themselves faced with the task of creating schools that will serve their students well, even if they are uncertain about the nature of the society that their students will face in the future. During the past 50 years, massive cultural, social, economic, political, environmental, and technological changes have meant that every facet of schooling has been subjected to investigation and rethinking, including classroom assessment.

Throughout most of the 20th century, classroom assessment was considered a mechanism for providing an index of learning, and it followed a predictable pattern: teachers taught, tested the students' knowledge of the material, made judgements about students' achievement based on the testing, and then moved on to the next unit of work. More recently, however, this approach to assessment has come into question as societal expectations for schooling have changed, cognitive science has provided new insights into the nature of learning, and the traditional role of assessment in motivating student learning has been challenged.

- In the past, schooling beyond basic skills and knowledge was viewed as required by only a few. But now, high school graduation is considered a necessity for all, and the educational community is being asked to ensure that graduates be proficient in complex critical thinking, problem-solving, and effective communication to meet demanding societal, economic, and technological challenges.
- Learning was long thought to be an accumulation of atomized bits of knowledge that are sequenced, hierarchical, and need to be explicitly taught and reinforced. Learning is now viewed as a process of constructing understanding, during which individuals attempt to connect new information to what they already know, so that ideas have some personal coherence. Individuals construct this understanding in many different ways, depending on their interests, experience, and learning styles.

- Educators have traditionally relied on assessment that compares students with more successful peers as a means to motivate students to learn, but recent research suggests students will likely be motivated and confident learners when they experience progress and achievement, rather than the failure and defeat associated with being compared to more successful peers (Stiggins, 2001).

These three changes in societal expectations and in knowledge about learning and motivation have strong implications for how teachers teach, what they teach, and especially how they apply classroom assessment practices.

## Classroom Assessment and Societal Change

*Reflection:*

*What recent societal changes have had a significant effect on your students and their community? What has the effect been on teaching and learning?*

Formal and informal assessment of learning has always been part of educational institutions. With the advent of universal schooling at the turn of the 20th century, children were expected to attend school to learn basic skills. Assessment was the mechanism for making decisions about future programs, and for providing information to parents about their children's learning.

At the middle of the 20th century, it became clear that schooling was an important key to social mobility, and that achievement in school was the basis for entry into the workplace. Tests and exams took on major importance in deciding which students would have access to higher education. Many jurisdictions instituted standardized testing programs alongside classroom assessment to ensure fair, accurate, and consistent opportunities for students.

Since the 1960s and 1970s, the purposes for classroom assessment have expanded. The terms *formative assessment* and *summative assessment* entered the language of educators—formative assessment being assessment that takes place during teaching to make adjustments to the teaching process, and summative assessment being assessment at the end of a unit or term to convey student progress. In order to fulfill these two purposes, educators extended their assessment practices and began assessing a wider range of student work, such as practical tasks, coursework, projects, and presentations. For the most part, however, assessment was still a matter of making statements about students' weaknesses and strengths.

**Expectations of schooling now include these types of valued outcomes:**

**Knowledge:** knowing and understanding substantive subject matter content

**Reasoning:** using the knowledge and understanding to figure out things and solve problems

**Performance skills:** doing something where it is the process that is important

**Dispositions:** developing valued feelings, attitudes, interests, and motivations

(Adapted from Stiggins, ***Leadership for Excellence in Assessment: A Powerful New School District Planning Guide***)

More recently, the focus in educational policy has been on preparing all students for tomorrow's world. At the same time, the expectations for students have increased in breadth and depth, dramatically affecting teachers' instructional and assessment roles, and students' roles as learners.

## The Effects of Classroom Assessment on Learning

**Resource:**
Lambert and McCombs, *How Students Learn: Reforming Schools through Learner-Centered Education*

There is considerable evidence that assessment is a powerful process for enhancing learning. Black and Wiliam (1998) synthesized over 250 studies linking assessment and learning, and found that the intentional use of assessment in the classroom to promote learning improved student achievement. Increasing the amount of time on assessment, however, does not necessarily enhance learning. Rather, when teachers use classroom assessment to become aware of the knowledge, skills, and beliefs that their students bring to a learning task, use this knowledge as a starting point for new instruction, and monitor students' changing perceptions as instruction proceeds, classroom assessment promotes learning.

Learning is an interactive process by which learners try to make sense of new information and integrate it into what they already know. Students are always thinking and they are either challenging or reinforcing their thinking on a moment-by-moment basis.

Before teachers can plan for targeted teaching and classroom activities, they need to have a sense of what it is that students are thinking. **What is it that they believe to be true?**

This process involves much more than "Do they have the right or wrong answer?" It means making students' thinking visible and understanding the images and patterns that they have constructed in order to make sense of the world, from their perspective.

(Earl, ***Assessment as Learning: Using Classroom Assessment to Maximize Student Learning***)

When learning is the goal, teachers and students collaborate and use ongoing assessment and pertinent feedback to move learning forward. When classroom assessment is frequent and varied, teachers can learn a great deal about their students. They can gain an understanding of students' existing beliefs and knowledge, and can identify incomplete understandings, false beliefs, and naïve interpretations of concepts that may influence or distort learning. Teachers can observe and probe students' thinking over time, and can identify links between prior knowledge and new learning.

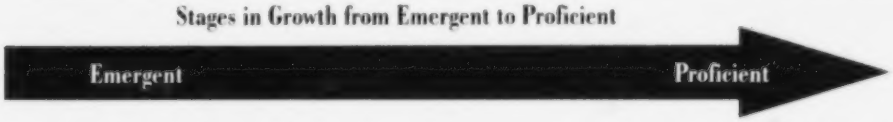
Learning is also enhanced when students are encouraged to think about their own learning, to review their experiences of learning (What made sense and what didn't? How does this fit with what I already know, or think I know?), and to apply what they have learned to their future learning. Assessment provides the feedback loop for this process. When students (and teachers) become comfortable with a continuous cycle of feedback and adjustment, learning becomes more efficient and students begin to internalize the process of standing outside their own learning and considering it against a range of criteria, not just the teacher's judgement about quality or accuracy.

Human beings engage in metacognition—reflecting on their own thinking processes. Experts describe metacognitive thinking as an internal conversation—monitoring their own understanding, predicting their performance, deciding what else they need to know, organizing and reorganizing ideas, checking for consistency between different pieces of information, and drawing analogies that help them advance their understanding.

(Costa, Prologue to Heryle, ***Visual Tools for Constructing Knowledge***)

When students engage in this ongoing metacognitive experience, they are able to monitor their learning along the way, make corrections, and develop a habit of mind for continually reviewing and challenging what they know.

**Stages in Growth from Emergent to Proficient**




| | | | | |
|---|---|---|---|---|
| Little or no practical experience. Dependent on "rules" and emulating those thought to be proficient. | Expects definitive answers. Some recognition of patterns. Limited experience. Still relies on rules. | Locates and considers possible patterns. Has internalized the key dimensions so that they are automatic. | Uses analysis and synthesis. Sees the whole rather than aspects. Looks for links and patterns. Adjusts to adapt to the context. | Understands the context. Has a holistic grasp of relationships. Considers alternatives and independently integrates ideas into efficient solutions. Makes ongoing adaptations automatically. |

When they are learning in any area, students make connections and move along a continuum from emergent to proficient. Learners at the emergent stage are generally uncertain, and rely heavily on direct instruction, modelling, and whatever "rules" may exist to give them direction about how to proceed, with little sense of underlying patterns. As learners become more competent, they develop more complex schemata of understanding, gain in confidence and independence, and become efficient in problem-solving within new contexts. They are able to apply the new learning independently and direct their own learning.

*Reflection:*

*Think about something in which you are proficient. How did you move from emergent to proficient? Describe the experiences that you had along the way and what insights they provide about your growth in learning.*

*Think of something in which you consider yourself to be at the emergent stage. What are those who are proficient in this area doing that you want to emulate?*

When teachers understand this emergent-to-proficient process as it relates to curriculum outcomes, they can use assessment as the mechanism for helping students understand and value their own learning and predict what comes next. The ongoing cycle of assessment and feedback can guide students and scaffold their learning as they move along the learning continuum.

## Classroom Assessment and Its Effects on Motivation

Motivation is essential for the hard work of learning. The higher the motivation, the more time and energy a student is willing to devote to any given task. Even when a student finds the content interesting and the activity enjoyable, learning requires sustained concentration and effort.

**Resource:**
Brophy, "Synthesis of Research on Strategies for Motivating Students to Learn"

Past views of motivation were heavily influenced by the behaviourist psychology of the 1960s and 1970s, in which a schedule of rewards and punishments led to either reinforcing or extinguishing a particular behaviour. It was believed that assessment and grading motivated students to work hard and to learn. It is now understood that the relationship between grades and motivation is neither simple

**The logic of using assessment to motivate improvement is relatively simple:**

- Assessments can communicate meaningful standards to which school systems, schools, teachers, and students can aspire.
- These standards can provide focus and direction for teaching and learning.
- Results from the assessment support important insights on the nature, strengths, and weaknesses of student progress relative to the standards.
- Educators and students use this feedback to understand and direct their attention to improving relevant aspects of student learning.
- Assessment can motivate students to learn better, teachers to teach better, and schools to be more educationally effective.

(Herman and Klein, ***Assessing Opportunity to Learn: A California Example***)

nor predictable. Grades have been found to be motivating for some students, and demotivating for others. Students who generally do well are often motivated by the likelihood of success and praise that accompanies doing well. Students who typically do not do well may choose to avoid the likelihood of a failure by devaluing the assessment process and even school.

According to current cognitive research, people are motivated to learn by success and competence. When students feel ownership and have choice in their learning, they are more likely to invest time and energy in it. Assessment can be a motivator, not through reward and punishment, but by stimulating students' intrinsic interest. Assessment can enhance student motivation by

- emphasizing progress and achievement rather than failure
- providing feedback to move learning forward
- reinforcing the idea that students have control over, and responsibility for, their own learning
- building confidence in students so they can and need to take risks
- being relevant, and appealing to students' imaginations
- providing the scaffolding that students need to genuinely succeed

## Using Classroom Assessment for Differentiating Learning

Classes consist of students with different needs, backgrounds, and skills. Each student's learning is unique. The contexts of classrooms, schools, and communities vary. As well, the societal pressure for more complex learning for all students necessitates that teachers find ways to create a wide range of learning options and paths, so that all students have the opportunity to learn as much as they can, as deeply as they can, and as efficiently as they can.

**Resources:**

- Gregory and Chapman, *Differentiated Instructional Strategies*
- Hutchison, *Inclusion of Exceptional Learners in Canadian Schools*
- Manitoba Education and Training, *Success for All Learners: A Handbook on Differentiating Instruction*

Many jurisdictions have moved toward differentiated instruction—from the one-size-fits-all emphasis on the whole class to identifying the unique learning patterns of each student, using various instructional approaches to accommodate the range of learning patterns and styles, including designing instruction for students with various learning challenges and disabilities.

In the past, instruction and assessment were differentiated only for those students with identified needs. The class was typically regarded as a

homogeneous unit, and teachers used phrases such as "The lesson went well for the class" or "My students seemed to grasp that concept well." Any student for whom the lesson did not go well was considered an exception. Students with labels such as "learning disability," "English as a second language," "attention deficit disorder," or "gifted" were seen as "different" from the rest of the class, and the rest of the class was seen as a single entity. Yet, differences exist among all students, not just those with such labels. It is individuals, not classes, who learn. When students learn, they make meaning for themselves, and they approach learning tasks in different ways, bringing with them their own understanding, skills, beliefs, hopes, desires, and intentions. It is important to consider each individual student's learning, rather than talk about the learning of "the class."

**Universal Design for Learning**

Universal Design for Learning extends principles used in architecture and product design to learning. Universally designed environments and products accommodate the widest spectrum of users, and adaptability is subtle and integrated into the design. So, too, can teachers adjust teaching, assessment, and learning to accommodate all students, not just those with disabilities. Learning materials can be varied and adaptable to include, for example, multi-sensory digital learning tools and digital resources, rather than centering on printed text. Assessment tasks can be designed to allow students to demonstrate their accomplishment of learning outcomes through visual, active, and oral modes, as well as through writing.

(Adapted from Center for Applied Special Technology, Universal Design for Learning)

Assessment practices lead to differentiated learning when teachers use them to gather evidence to support every student's learning, every day in every class. In order to meet the wide range of abilities, motivations, and learning styles of their students, teachers need to differentiate the extent of independence with which students work, and the types and complexity of the learning. Curriculum guides and programs of study provide the learning outcomes that teachers use to tailor assessment and instruction to help students learn and make sense of their learning.

**Shifting Paradigms: From "Deficit" Explanations of Diversity to "Inclusive" Strategies for All**

| Deficit Paradigm | Inclusion Paradigm |
|---|---|
| • what's wrong with the child | • what's wrong with the environment |
| • focus on deficits | • focus on strategies |
| • prescriptive | • malleable |
| • tolerates differences | • embraces differences |
| • takes child out of class | • keeps child in class |
| • reliance on external expert | • teacher/parent as expert |
| • professionalized | • personalized |

(Adapted from Philpott et al., *Supporting Learner Diversity in Aboriginal Schools*)

The learning needs of some students are so significant, however, that they may require individualized learning plans in which the curricular learning outcomes have been adjusted. Teachers of these students can access support from professionals and resource materials specific to the student's particular learning needs.

## Quality in Classroom Assessment

Classroom assessment involves complex processes requiring teachers' professional judgement. Teachers decide how to assess, what to assess, and when to assess. They also interpret students' learning according to reference points for success, such as curricular learning outcomes. The inferences about students'

learning that teachers make need to be credible, fair, free from bias, and connected to their intended purposes.

> Assessment methods should be free from bias brought about by student factors extraneous to the purpose of the assessment. Possible factors to consider include culture, developmental stage, ethnicity, gender, socio-economic background, language, special interests, and special needs. Students' success in answering questions on a test or in an oral quiz, for example, should be not be dependent upon prior cultural knowledge, such as understanding an allusion to a cultural tradition or value, unless such knowledge falls within the content domain being assessed. All students should be given the same opportunity to display their strengths.
>
> (*Principles for Fair Assessment Practices for Education in Canada*)

Assessment is fundamentally a measurement process, subject to the principles of measurement. Measurement, as it is used here, is defined in the broadest sense of "determining the degree of something." In order to make the right decisions about students, it is necessary that teachers adhere to these basic measurement principles.

There are four basic principles or quality issues that are important in classroom assessment: reliability, reference points, validity, and record-keeping.

### *Reliability*

In classroom assessment, reliability addresses the questions How sure am I? How confident am I that this assessment process provides enough consistent and stable information to allow me to make statements about a student's learning with certainty?

When teachers make statements about students' learning, they are making inferences about what students know and can do from the evidence that is available to them through assessment. If the assessment process is reliable, the inferences about a student's learning should be similar when they are made by different teachers, when the learning is measured using various methods, or when students demonstrate their learning at different times. If teachers are unsure about whether the inferences would be consistent under all these conditions, there is a question about reliability. When there is any doubt, there is probably not yet enough information to make a reliable statement.

There are many ways to promote reliability:

- Teachers can use a variety of assessment tasks to provide a range of information. The more information gathered, the clearer is the picture of a student's learning profile.
- Students can show their learning in many different ways. If teachers are to have a good understanding of an individual student's learning, they need to allow that student to demonstrate his or her competence in a manner that suits his or her individual strengths. For example, one student may choose to do an oral presentation to demonstrate understanding of a concept, while another may choose to complete a written text. Teachers can use a variety of systematic processes—for example, scoring keys, rubrics, rating scales, and continua—to make statements about student work in relation to the learning outcomes.

**Enhancing Reliability by Working Together**

Little et al. ("Looking at Student Work") found that when teachers were "invited to look closely together at evidence of student learning," it opened up the dialogue about what counts and what is good evidence. Discussions became valuable when the teachers started talking about their instruction and framed their suggestions in ways that linked to the problem of student learning as reflected in the student work. This took time because teachers had to get to a point where they were doing the unfamiliar—looking at student work without evaluative judgement. But, as they talked about what was in the work in descriptive rather than in evaluative terms, they were able to make their criteria more explicit and talk about the criteria with the group.

- Teachers can work with other teachers to review student work. By working together, they establish agreement among themselves about what is expected and what can be learned from a particular assessment. Bringing a collective insight about what is expected to the exercise results in more reliable determinations of what students understand.

### *Reference Points*

The interpretation of any kind of measurement depends on reference points. When carpenters measure distance, they use metres and centimetres; meteorologists refer to temperature in relation to the freezing point of water (0° C); restaurant reviewers rate the food in restaurants based on quality, originality, and presentation. In classroom assessment, there are three reference points teachers use when considering a student's performance:

1. How is the student performing in relation to some pre-determined criteria, learning outcome, or expectation (criteria- or outcomes-referenced)?
2. How is the student performing in relation to the performance of other students in the defined group (norm-referenced)?
3. How is the student performing in relation to his or her performance at a prior time (self-referenced)?

If all three of these reference points are used together, and the distinctions among them are blurred, the resulting score or statement of learning does not provide clear information about the nature or quality of the specific learning. A common but problematic scenario when considering a student's work is to pay particular attention to the content knowledge that the student has demonstrated in the unit or course. Then that student's work is compared to that of other students in that class and other classes. Finally, adjustments are made to the judgement based on past performance and behaviour (e.g., work turned in, attendance, work habits). The lack of clarity inherent in this process, however, makes it difficult for anyone other than the teacher to disentangle the three reference points. The resulting score or statement doesn't provide detail about the nature or quality of the specific learning.

Each reference point results in a different kind of interpretation about students' learning. It is only by clearly distinguishing the reference points that teachers can provide students, parents, and the general public with meaningful information about what is deemed important, and what the stages are in the journey from emergent to proficient.

### *Validity*

Validity in classroom assessment is about the accuracy of the interpretation and the use of assessment information: How well does the assessment measure what I'm trying to measure? Does the interpretation of the results lead to appropriate conclusions and consequences?

When thinking about validity, we focus on the inferences that are drawn from an assessment and the consequences of these inferences for those who have been assessed. When an assessment is misinterpreted or used for purposes that were not intended, the result may be poor decisions and problematic consequences.

Validity of classroom assessment depends on

- analyzing the intended learning and all its embedded elements
- having a good match among the assessment approaches, the intended learning, and the decisions that teachers and students make about the learning
- ensuring that the assessment adequately covers the targeted learning outcomes, including content, thinking processes, skills, and attitudes
- providing students with opportunities to show their knowledge of concepts in many different ways (i.e., using a range of assessment approaches) and with multiple measures, to establish a composite picture of student learning

**Unintended Consequences from an Invalid Interpretation**

Imagine that a social studies curriculum outcome for students is "organization and communication" and that the objective includes these sub-items:

- students recall, rank, and select historical information
- students accurately select and use chronological conventions
- students communicate their knowledge and understanding of historical events

In teaching this complex constellation of concepts in a unit about events that led to World War II, a teacher provides the students with detailed graphic organizers and processes for identifying the pertinent information, organizing it, interpreting it, and presenting a summary. As an end-of-unit assessment, the teacher asks the students to review a selection of material that they had studied in class and use a graphic organizer to produce a detailed summary of the events leading to World War II.

The teacher intends this assessment to infer whether the students had internalized the concepts and skills associated with "organization and communication," and to report to parents about each student's level of competence on this outcome.

However, because the material that appeared on the assessment was not new and the students had already practised creating graphic organizers with this material, the teacher's inference is faulty. In fact, he is able to assess only the students' recognition and recall from prior exposure, not their ability to organize and communicate new material.

When these students move to the next teacher, they are assumed to have a base of skill in organizing and communicating, and so may not be given an opportunity to develop and internalize these key skills.

### *Record-Keeping*

High-quality record-keeping is critical for ensuring quality in classroom assessment. The records that teachers and students keep are the evidence that support the decisions that are made about students' learning. The records should include detailed and descriptive information about the nature of the expected learning as well as evidence of students' learning, and should be collected from a range of assessments.

# Chapter 2

# Purposes of Classroom Assessment

Chapter 1 provided the context and arguments for the necessity of changing classroom assessment. In this chapter, the emphasis is on the purposes of classroom assessment. It asserts that assessment works best when its purpose is clear, and when it is carefully designed to fit that purpose.

The focus of this document is on three[2] distinct but inter-related purposes for classroom assessment: assessment *for* learning, assessment *as* learning, and assessment *of* learning.

1. Assessment *for* learning is designed to give teachers information to modify and differentiate teaching and learning activities. It acknowledges that individual students learn in idiosyncratic ways, but it also recognizes that there are predictable patterns and pathways that many students follow. It requires careful design on the part of teachers so that they use the resulting information to determine not only what students know, but also to gain insights into how, when, and whether students apply what they know. Teachers can also use this information to streamline and target instruction and resources, and to provide feedback to students to help them advance their learning.
2. Assessment *as* learning is a process of developing and supporting metacognition for students. Assessment as learning focusses on the role of the student as the critical connector between assessment and learning. When students are active, engaged, and critical assessors, they make sense of information, relate it to prior knowledge, and use it for new learning. This is the regulatory process in metacognition. It occurs when students monitor their own learning and use the feedback from this monitoring to make adjustments, adaptations, and even major changes in what they understand.

2. Some authors identify only two categories: assessment *of* learning and assessment *for* learning. As such, the term assessment *for* learning encapsulates the ideas described here in two categories—assessment *for* learning and assessment *as* learning.

It requires that teachers help students develop, practise, and become comfortable with reflection, and with a critical analysis of their own learning.

3. Assessment *of* learning is summative in nature and is used to confirm what students know and can do, to demonstrate whether they have achieved the curriculum outcomes, and, occasionally, to show how they are placed in relation to others. Teachers concentrate on ensuring that they have used assessment to provide accurate and sound statements of students' proficiency, so that the recipients of the information can use the information to make reasonable and defensible decisions.

*Reflection:*

*What is an example from your teaching practice of assessment* ***for*** *learning? assessment* ***as*** *learning? assessment* ***of*** *learning?*

## Balance and Tensions in Assessment Purposes

Assessment *for* learning, assessment *as* learning, and assessment *of* learning all serve valuable, and different, purposes. It is not always easy, however, getting the balance right. If we want to enhance learning for all students, the role of assessment *for* learning and assessment *as* learning takes on a much higher profile than assessment *of* learning. Traditionally, the focus of classroom assessment has been on assessment *of* learning—measuring learning after the fact, using the information to make judgements about students' performances, and reporting these judgements to others. Teachers traditionally have also been using assessment *for* learning when they built in diagnostic processes, formative assessment, and feedback at various stages in the teaching and learning process, though it was often informal and implicit. Systematic assessment *as* learning—where students become critical analysts of their own learning—was rare. Although some teachers have incorporated self-assessment into their programs, few have systematically or explicitly used assessment to develop students' capacity to evaluate and adapt their own learning.

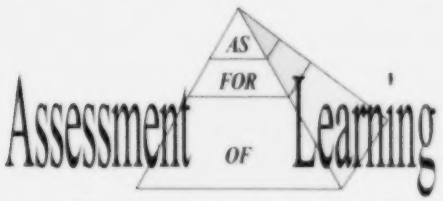
The first pyramid illustrated in Fig. 2.1 shows the traditional relationship of the three approaches to one another, assessment *of* learning being the predominant focus. The second pyramid suggests a reconfiguration of the balance among the three approaches, one that emphasizes assessment *as* learning, and assessment *for* learning. Assessment *of* learning has an important role to play, but is used only when summative judgements are required.

*Reflection:*

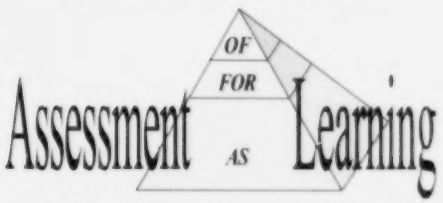
*Where are you on an emerging-proficient continuum in your understanding of different classroom assessment purposes and how purpose influences the assessment process?*

It is purpose that dictates how assessment is constructed and used. If the purpose is enhancing learning, the assessment needs to give students an opportunity to make their learning apparent without anxiety or censure. If the purpose is checking learning for reporting, teachers need to be especially concerned about the quality of the assessment, and how it might be used by others. It is very difficult, and sometimes impossible, to serve three different assessment purposes at the same time. It is important for educators to understand the three assessment purposes, recognize the need to balance among them, know which one they are using and why, and use them all wisely.

**Fig. 2.1 Balance Among Assessment Purposes**




*Traditional Assessment Pyramid*




*Reconfigured Assessment Pyramid*

Earl, *Assessment as Learning: Using Classroom Assessment to Maximize Student Learning*

## Planning the Assessment Process

Careful planning is required to ensure that there are logical connections among the purpose, methods, and use of the results. Classroom assessment is planned in relation to purpose and in alignment with curriculum and instruction. Curriculum, assessment, instruction, and learning are interconnected and interact in an iterative and sometimes (but not always) cyclical process. All four need to be aligned and coherent for the learning to be effective and meaningful.

**Resource:**
Wiggins and McTighe, *Understanding by Design*

The process of planning is what provides a blueprint that centres on the purpose, makes the connections explicit, and creates a coherent organizational structure. Against this blueprint teachers can constantly question their strategies: Are my strategies still appropriate and aligned? Do I need to make adjustments or perhaps even shift direction? Although teachers do not need to adhere strictly to their plans, without proper planning it is difficult to ensure balance and coherence. Section II outlines a set of planning considerations for designing and using assessment *for* learning, assessment *as* learning, and assessment *of* learning.

**Backward Mapping: Planning with the End in Mind**

As teachers, we sometimes begin planning a unit or sequence of learning activities by identifying a topic and favoured lessons and activities that optimize the resources we already have on hand, then proceed with teaching the material. Somewhere at the end of this process, we assess what students have learned, only to discover that the lessons or the assessment tools did not align well with curricular expectations.

Backward mapping, on the other hand, creates the necessary alignment among desired outcomes, assessment tools, and teaching strategies by turning the planning process on its head. It prompts us to start at "the end" with the goals and outcomes we hope to achieve. Once the Where do we need to end up? question is answered, then the subsequent questions How can we best get there? and How will I know when we've arrived? can be considered. Backward mapping requires us not only to think about the curricular goals we want students to meet, but also to deconstruct the complex learning processes involved to identify the stages of learning. It also requires us to consider the misconceptions and confusions we might encounter along the way, and decide how we will assess whether students are progressing toward the goals. Only then should we begin considering which assessment and instructional strategies would work best to support students in working toward the desired outcomes.

## Reporting

The fundamental purpose of reporting is to enable parents and students to understand the student's performance at a specific point in time, and to decide what is required for future progress. More complex forms of classroom assessment require new ways of reporting. These new ways need to include both a frame of reference and sufficient information, so that an outsider can make sense of the information. Suggestions should be included about how the information could be used to help make reasoned judgements. The reports should clearly state purpose and learning outcomes, and should present an accurate profile of a student in relation to these. G. Wiggins (1998) suggests that reporting be outcome-based, honest yet fair, rich in context, and user friendly. This kind of reporting

> Revision of report cards is best not construed as a matter of teachers coming up with new designs and grading systems based on their own interests. Better reports require that we ask a radical question: Who is the audience and what is the purpose of reporting?
>
> (Wiggins, ***Educative Assessment: Designing Assessment to Inform and Improve Student Performance***)

- explicitly identifies the purpose of the assessment
- provides sufficient context and points of reference to make interpretation reasonable
- uses a variety of descriptors and symbols (e.g., letter or percent grades) that have clear, agreed-upon, and stable meaning
- provides rich, detailed information and evidence (not just a single grade)

## Assessment Tool Kit

*Reflection:*

*Which of the assessment methods in Fig. 2.2 do you use? For what purposes?*

The variety of methods available for collecting, interpreting, and reporting information about what students know and can do is endless, and there are many excellent resources for teachers.[3] Although some methods have come to be associated with assessment during instruction and learning, and others with assessment at the end of a unit or term, there are a variety of methods that can be used for all three purposes: assessment *for* learning, assessment *as* learning, and assessment *of* learning. What is important is that teachers first clarify the purpose of assessment and then select the method that best serves the purpose in the particular context. The list in Fig. 2.2 is not exhaustive, but gives examples of the kinds of methods that teachers can use for assessment purposes. Although the methods have been organized by function—gathering information, interpreting information, keeping records, and communicating—there are indeed interrelationships among them, and it is important to note that some methods belong in multiple categories.

3. See Resources for Further Reading at the end of this document for a partial list, as well as the resources noted in the margins throughout.

## Fig. 2.2 Assessment Tool Kit

| Method | Description |
|---|---|
| **Gathering Information** | |
| Questioning | asking focussed questions in class to elicit understanding |
| Observation | systematic observations of students as they process ideas |
| Homework | assignments to elicit understanding |
| Learning conversations or interviews | investigative discussions with students about their understanding and confusions |
| Demonstrations, presentations | opportunities for students to show their learning in oral and media performances, exhibitions |
| Quizzes, tests, examinations | opportunities for students to show their learning through written response |
| Rich assessment tasks | complex tasks that encourage students to show connections that they are making among concepts they are learning |
| Computer-based assessments | systematic and adaptive software applications connected to curriculum outcomes |
| Simulations, docudramas | simulated or role-playing tasks that encourage students to show connections that they are making among concepts they are learning |
| Learning logs | descriptions students maintain of the process they go through in their learning |
| Projects and investigations | opportunities for students to show connections in their learning through investigation and production of reports or artifacts |
| **Interpreting Information** | |
| Developmental continua | profiles describing student learning to determine extent of learning, next steps, and to report progress and achievement |
| Checklists | descriptions of criteria to consider in understanding students' learning |
| Rubrics | descriptions of criteria with gradations of performance described and defined |
| Reflective journals | reflections and conjecture students maintain about how their learning is going and what they need to do next |
| Self-assessment | process in which students reflect on their own performance and use defined criteria for determining the status of their learning |
| Peer assessment | process in which students reflect on the performance of their peers and use defined criteria for determining the status of their peers' learning |
| **Record-Keeping** | |
| Anecdotal records | focussed, descriptive records of observations of student learning over time |
| Student profiles | information about the quality of students' work in relation to curriculum outcomes or a student's individual learning plan |
| Video or audio tapes, photographs | visual or auditory images that provide artifacts of student learning |
| Portfolios | systematic collection of their work that demonstrates accomplishments, growth, and reflection about their learning |
| **Communicating** | |
| Demonstrations, presentations | formal student presentations to show their learning to parents, judging panels, or others |
| Parent-student-teacher conferences | opportunities for teachers, parents, and students to examine and discuss the student's learning and plan next steps |
| Records of achievement | detailed records of students' accomplishment in relation to the curriculum outcomes |
| Report cards | periodic symbolic representations and brief summaries of student learning for parents |
| Learning and assessment newsletters | routine summaries for parents, highlighting curriculum outcomes, student activities, and examples of their learning |

## A Vignette of Assessment in Action

Assessment happens every day in classrooms. It is inextricably tied to instruction, and is always mediated by the particular needs of students. The following vignette shows two teachers' learning journey as they collaborate, plan, rethink, try out, and reflect on their assessment and instruction practices. Their explanation sets the stage for the approaches elaborated upon in subsequent chapters.

Christine was in the staff room of her Middle Years school, marking math tests and thinking about what she could do to help Sam. He'd failed another math test. Sam was an enigma to her. Sometimes he responded well to questions she asked him in class, but mostly he just looked down. Recently, he had begun disturbing others in class.

Paul, the drama teacher, came in. *"Hi Chris. You look to be deep in thought. Is something wrong?"*

*"I'm concerned about Sam. He just failed another test. Have you noticed anything unusual about his behaviour in drama class recently?"*

*"No. But I have been very impressed with the creative ideas he has for blocking the set."*

*"Blocking the set? What do you mean?"*

*"It's part of staging a play, deciding where to place things on the stage, what props we need, who should enter from where, things like that. Sam has a different way of seeing things that really helped the class plan the stage layout. He's able to visualize the scene and the entire stage. He had several suggestions about where to put the props to divide the stage into areas that are complex irregular shapes, but are all about equal size so that each area is just large enough for the characters and the action. And he suggested a way to move just one wall to make a different configuration for another scene, without disrupting the visual proportions."*

Christine looked surprised. *"It sounds like he's applying mathematical concepts. It doesn't sound like the same Sam that I had just been thinking about."* Christine began to think about how to tap into Sam's ability to visualize spatial relationships and use this to scaffold his math learning.

*"You know, Paul, I've also been thinking about the professional growth plan that we're to do. I'd like to do something to help me better understand Sam. Maybe we could work as a team, if you're interested? We could focus on differentiating instruction, not just for Sam, but for all of the kids."* Christine had been thinking about the diversity of the students in her class and the need for diversity in relation to their learning. Two of the students were following individual learning plans and several others were new learners of English. In fact, one boy, Saad, had just arrived from North Africa.

The next day, Paul and Christine began drafting their joint professional growth plan. They agreed to take an action research approach to understanding Sam's and the others' learning needs. The focus would be mathematics. Christine would work with Sam in the classroom, and Paul would make focussed observations of Sam in drama class and one day a week in Christine's math class. Paul would also contribute and learn by being a "critical friend" to Christine as they generated ideas, planned instruction, debriefed how things worked, and reflected on what they were learning. They made a list of books and websites to investigate, and agreed to meet once a week. They would each keep journals of their planning, the results of their strategies, their reflections, and questions for follow-up.

Christine was about to start a mathematics unit on operations with fractions. Here was their chance to put their plan into action. Before moving into adding and subtracting fractions, Christine needed to assess what each student already

understood about fractions, the gaps in understanding, and their thinking processes when working with fractions. Christine and Paul developed a set of tasks designed to gather some initial understanding of students' prior knowledge in relation to the following outcomes from previous grades:

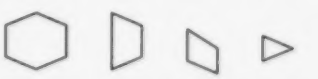
- basic concepts and representations of fractions: transfers easily among concrete, pictorial, verbal, and symbolic representations
- ordering of fractions: independently orders a sequence of fractions involving any combination of conditions
- equivalent fractions: given a fraction, can find and state a whole series of equivalent fractions
- communicating mathematical thinking in fractions: work is shown and explanations are clear and fully developed; use of mathematical language is precise

Each student was given grid paper, counters, and a set of fraction tiles to use in any way he or she wished. They were each given six sheets of paper, with one task on each sheet. On their task sheets they were to demonstrate their thinking as they came up with solutions. They could demonstrate this thinking by drawing or writing, or both. The first task would be done in their "home groups." The remaining five tasks would be done individually, but their explanations would be shared with their "math buddy" later.

Christine explained that their work on these tasks would give them, as well as her, a good idea about what they needed to do next in order to fully understand fractions and the operations with fractions that they would soon be learning.

Following are the six orientation tasks that the students were given:

1. For this task, you can work in your "home groups." You'll need the following fraction tiles.




   Suppose the following shape is 1 whole.

   By placing fraction tiles on the shape, represent one or more of the following fractions in as many ways as possible: 1/2, 2/3, 1/6, 3/4.

   Draw and write the symbols for all the equivalent fractions that you make.
2. Which fraction is larger: 1/6 or 1/5? Show or explain your thinking.
3. Replace the "?" with a number to complete the following equation: 18/24 = 6/?
4. Put the following fractions in order from smallest to largest: 3/4, 1/6, 4/3, 5/6, 7/6, 7/12, 1/5.
5. Suzanne has 11 cookies, and she wants to share them with her 3 friends. How many cookies will Suzanne and each of her friends get? Show how you know with a diagram.
6. (a) Odette and George each have the same kind of chocolate bar. Odette still has 3/4 of her chocolate bar left. George has 7/12 of his left. Who has more chocolate left? Show how you know this with a diagram.

   (b) How much chocolate do Odette and George have in total?

As they were approaching the end of the math class, Christine asked the students to look at the six sheets that they had been working on and make two piles. One pile would contain the tasks they thought they understood how to do; they marked all of the pages in this pile with a check mark (✔). The other pile would contain the tasks they felt they didn't fully understand, or

ones where they were unsure about how to proceed. These pages were marked with a question mark (?). After class, Christine reviewed the task sheets.

At the beginning of the next math class, the students were given their math task sheets and, with their math buddies, shared their thinking and how they arrived at their solutions. The math buddies' task was to ask for more information or clarification about their buddies' thinking. During these exchanges, Christine circulated about the room, observing and making notes about their understandings, gaps, and misconceptions.

In a class debriefing with the students about the tasks, Christine asked questions.

Christine: *Let's start with the second task. Sabrina, which fraction is larger, 1/6 or 1/5? How do you know?*

Sabrina: *1/5 is larger. I know because I drew two identical circles and cut one into 5 equal parts and the other into 6. When you look at them, the slice that represents 1/5th is bigger. If it were a pizza, I'd rather be sharing among 5 than 6. That way I get more.*

Christine: *Clifford, do you agree?*

Clifford: *Yes I do. If the whole thing is cut into 5 pieces, then the pieces are bigger than if it is cut into 6 pieces.*

Christine: *So, 1/5 is bigger than 1/6. Even though 6 is bigger than 5. Sam? Is that true?*

Sam: *Yeah, it kinda doesn't make sense but when you look at it in a picture, you can see it. When there are fewer pieces, the number on the bottom of the fraction is smaller. And the pieces are bigger.*

Christine: *Anthony, what do you think about the third task? What does the "?" stand for?*

Anthony: *I'm not sure. It might be 8. I tried to think about having 24 marbles and if I took 18 of them, that would be 18 of 24. So, if I had 6 marbles out of something and it was the same, I think it would be out of 8, but I'd only have 6 marbles. I don't know. It's confusing.*

Christine: *Any thoughts about this one, Penny?*

Penny: *Yeah, 18/24 is 3/4 and 6/8 is also 3/4. So, Anthony is right. The question mark stands for 8.*

Christine: *Let's look at the fourth task. Trevor, what did you think is the largest fraction, and why?*

Trevor: *4/3 and 7/6 are the largest because they're both larger than one. 4/3 is the same as 8/6, which is larger than 7/6. Therefore, 4/3 is the largest fraction.*

Based on her observations of students working on the tasks (in groups and individually), their explanations of their thinking to their math buddies, her review of their task sheets, and the questioning in class, Christine completed an observation form that she and Paul had designed. The accompanying chart provides a sample of her records.

When Christine met with Paul next, she explained how this process of collecting evidence of students' understanding had already shown her much. After Paul had reviewed her notes, he said, *"Well, it looks like the kids are all over the map in their understanding. And Sam doesn't stand out as a problem. His profile is not that different from some of the others. He actually seems to have a pretty good sense of the concepts. Am I right?"*

*"Yes. Sam has trouble expressing what he knows and can do, but I think he basically understands the concepts. It's as if he doesn't have the mathematical language to represent what he is thinking. The pictures he draws are accurate, but that doesn't translate into the abstract language of mathematics. What I find amazing is that there are many kids like Sam who get the concepts, but don't know how to express what they know. And, there are some who really need to have more direct experience with the concepts related to 'parts of a unit' before they go on to do operations with fractions. A couple of them need even more than that. I need to find a way for them to catch up."*

Based on what each student needed to learn next, Christine began planning her instruction and determining groups. Many of the students already demonstrated a solid grasp of the concepts and were ready to move forward with some consolidation

| Summary of Observations: *Prior Knowledge of Fractions* | | |
|---|---|---|
| **Student** | **Understanding** | **Feedback, ideas, and follow-up** |
| *Trevor* | *Readily transfers among concrete, pictorial, symbolic representations and has a good sense of the congruence across different representations.*<br>*Correctly ordered the entire series of equivalent fractions and was already talking about how they would be represented in decimals and percents.*<br>*Uses mathematical language. Explanations (verbal and written) are clear and precise.*<br>*Understood all questions, including the basic addition of fractions task.* | *Ready to work with addition and subtraction of fractions.*<br>*Provide challenging opportunities to apply fractions and complex representations.* |
| *Anthony* | *Was able to work with the shapes with ease and found several equivalent fractions.*<br>*Provided the correct answer for the equation 18/24 = 6/? but was very self-conscious when describing his reasoning to his math buddy.*<br>*Indicated uncertainty in the debriefing. Only partially completed the tasks and put '?'s on all pages.* | *Had assumed Anthony had a better understanding than he was able to demonstrate. Seems like there may be something troubling him in his life outside of school.*<br>*Work individually with him to find out what is confusing him and then ensure he gets lots of opportunity to practise and consolidate his learning.* |
| *Sam* | *Completed the task with the pattern blocks very quickly and accurately and moved on to play with alternate configurations. When consulting with his math buddy, didn't use the language of fractions or of mathematics—simply said it "just went like this" and "like this," and when asked how he knew it he said "It's just obvious." Yet he could articulate his processes using pictorial references.*<br>*Didn't complete the ordering of fractions task during class because he had to first pictorially view what they looked like, but those he did complete were correct.* | *Seems to have a good understanding of how fractions work but needs to learn mathematical language (e.g., "numerator" and "denominator") and move from concrete to abstract representation of mathematical concepts. Some difficulty when concepts are applied to something other than area, perhaps because he can't visualize it.* |

| Student | Understanding | Feedback, ideas, and follow-up |
|---|---|---|
| *Penny* | *Has a solid grasp of the notion of fractions.*<br>*Was insistent that ½ was the only "right" way to represent half of the object. Realized that the other fractions were the same, but in her view, they were "wrong." Saw the same pattern in her written work. Found the answers and represented them right away in numbers rather than pictures. Wanted to know the "rules." This limited her willingness to experiment with various configurations in task #1.*<br>*Is already representing fractions as percentages, e.g., she mentioned that 3/4 also equals 75%.* | *Has a good understanding and is ready to move on to more complex work, but is stuck on "rules."*<br>*With more experience with concrete representation and manipulatives, she may recognize that finding alternatives is an important strategy in problem-solving, and that there are often other "right" ways. The challenge will be convincing her that the use of manipulatives is acceptable when problem-solving.* |
| *Clifford* | *Although he didn't make any marks on task sheets # 1 and #2, he was able to tell his math buddy about fractions of a unit and equivalent fractions.*<br>*Had begun work on task sheets 3 to 6 on his worksheet, but no written explanations provided.* | *Is doing very well with his individual learning plan.*<br>*Needs to continue working with manipulatives to consolidate his understanding of equivalences and ordering of fractions.*<br>*Should soon be ready to move on to adding and subtracting fractions, with support.* |
| *Saad* | *Provided well-developed solutions to all of the tasks using diagrams.*<br>*Not very familiar with mathematical language—not surprising given his command of the English language is still very limited. Used pictures and gestures so effectively that his group members and his math buddy could understand and translate into mathematical language.* | *Needs work on the language of mathematics and confidence in what he knows. Is ready for some more advanced work in fractions.*<br>*Will contact Saad's parents to bring them up to date. They have been concerned about his progress.* |
| *Lydia* | *The first task was designed with Lydia in mind. After her "home group" members showed her how to represent some simple fractions using the tiles and shapes (1/2 and 1/4), Lydia manipulated the tiles, fitting various configurations into the shape.*<br>*Remained quiet throughout. Because she did not articulate her thought processes while completing the task, I couldn't accurately determine her depth of understanding.* | *With her individualized program, I had hoped from the first task that I would learn more about what she understands, but it didn't work. Will try doing the tasks with her individually to get a sense of what to do next.* |

and extension of their learning. This included Trevor, Bill, and Saad. With Saad's emerging English language skills, Christine and his group members needed to help him, but he seemed ready for more challenging math tasks.

A second set of students seemed to understand the concepts, but needed to work on describing their work in mathematical language. Most of them were not yet confident about their knowledge because they were not able to communicate what they knew. They needed some direct instruction so that they could express themselves mathematically and be better positioned to do operations. This included Sam.

However, rather than forming groups within these two sets, Christine and Paul opted to try small mixed groups made up from across these two larger sets. Those who were already adeptly using mathematical language may be able to model this language for the others in their groups. For these mixed groups, Christine and Paul planned a series of challenges designed to provide practice and consolidation of their understandings and skills with adding and subtracting fractions.

Another group would benefit by working intensively with manipulatives and having opportunities to practise and talk about relationships of parts of a unit. Without a solid grasp of these concepts, they would feel frustrated, and would not be able to fully perform operations with fractions. Christine intended to work very closely with this group to help them catch up to the other groups. This group included Clifford and Lydia. Lydia was a concern, even though Christine was comfortable with the way she was programming for her according to her individualized learning plan. Christine would continue to work with her individually, and include her in as many class activities as possible.

Christine had some more assessment sleuthing to do with some of the other students. She needed to find out more about what was going on with Anthony, for example, before she could determine which group would best fit his needs. Penny was going to be a challenge. She was so sure of herself, dependent on rules and unbending in her convictions. Christine decided to put her in the group with Sam because they would be working on developing language to describe equivalences, and this would reinforce the idea that there are several ways to represent fractions.

In planning their instructional strategies for the unit, Christine and Paul discussed some of the reading they had been doing. Paul was particularly interested in helping students develop the "habits of mind" that are essential for learning new information and skills, and in knowing how to act on what they learn. Young people require explicit teaching, modelling, and practice in order to develop these habits.

From Christine's point of view, these habits of mind are essential in math. To be successful in math, students need to view and represent problems in various ways, form a hypothesis, and find solutions. This requires, for example, thinking flexibly, questioning, applying past knowledge to new situations, imagining and innovating, taking risks, and persisting. As Christine discovered, *"Many of the students are not very aware of their own thinking processes and they don't seem to have ways of knowing if they are on the right track or not. I was surprised by the number of students who placed question marks on their task sheets—even those who completed the tasks successfully. They wanted me to tell them if they are right or not. Maybe working on habits of mind will help them reflect on their own work."*

Christine began the next day by introducing the Sixteen Habits of Mind, which they would use increasingly in their work throughout the rest of the year:

**Habits of Mind**

1. persisting
2. managing impulsivity
3. listening with understanding and empathy
4. thinking flexibly
5. thinking about thinking
6. striving for accuracy
7. questioning and posing questions
8. applying past knowledge to new situations
9. thinking and communicating with clarity and precision
10. gathering data through all of the senses
11. creating, imagining, innovating
12. responding with wonderment and awe
13. taking responsible risks
14. finding humour
15. thinking independently
16. remaining open to continuous learning

(Costa and Kallick, *Habits of Mind*)

To start, they would focus on posing questions. The class discussed how questioning what you are thinking can lead to new ideas. Christine used examples from television, showing how detectives ask questions to find more evidence and come closer to understanding what might have happened. Sometimes their questions cause them to change their hypotheses or to think about the problem in completely different ways. Like detectives, the students would be learning to think about their thinking. What questions could you ask about the way you are thinking? What makes sense and what doesn't, and why? What makes you wonder about your ideas?

Christine discussed with the class how they were going to approach this unit, their groupings, and the kinds of learning they would be doing. Together they moved the furniture into a new configuration of activity stations for group work, and quiet places for individual work. She also indicated that they would write their habits-of-mind questions in their notebooks and on sticky notes that would later be assembled into concept maps.

For the next few math sessions, the students continued working in their groups on the assignments that Christine and Paul had developed. Christine worked with each group and with individuals to give them focussed, descriptive feedback and more complex challenges that would enable them to apply new learning in a number of contexts. As she worked with them, she wrote her observations about each student on a clipboard. During the one class per week in which Paul was able to be in the math class, he also observed and discussed with the students their questions and the concept maps they were developing.

Near the end of every math session, the students shared with the class some of their questions, and many ideas and possible explanations emerged. Christine asked students to write the idea or explanation that they thought was most sound in their notebooks. By reviewing these, Christine could get a sense of what they were thinking.

When Christine and Paul met next, they decided that the next habit of mind that they would introduce was "gathering data through all senses." They also agreed that they needed some way for the students to monitor their own learning about fractions. They began discussing criteria that students could use when Paul asked, *"Why are we doing this for them if they're learning to be skilled at self-assessment? We can all develop criteria together."*

The criteria that the class developed, with Paul's guidance in maintaining focus on the learning outcomes, are as follows:

| **Self-Assessment Criteria for Operations in Fractions** | | | |
|---|---|---|---|
| **Knowledge** | **Skills** | **Communication** | **Insight** |
| Do I understand operations with fractions, and why they're important to learn?<br>Do I ask thoughtful questions to help me better understand? | Can I do operations with fractions (add, subtract) and know when to use them?<br>Am I sure that my work does not contain calculation errors? | Have I shown my work and explained my thinking clearly and accurately so that others can understand it?<br>Can I show my understanding in pictures, in writing, in speaking, and in numbers and symbols?<br>Have I used correct mathematical language? | Can I find alternative ways to solve the problem?<br>Do I understand operations with fractions well enough to use them in new contexts? |

The students used the criteria to consider the work that they had done in the unit. By reviewing worksheets, project notes, and other materials in their math folders, they answered the self-assessment questions and provided evidence for their answers, just like detectives.

As they approached the end of the unit, Paul and Christine struggled with how they would communicate all that they had learned about the students' accomplishments, and all that the students had learned about their own learning, using only

letter grades and short comments on a report card. They decided to use the anecdotal comment space to provide a concise summary of each student's current level of understanding, and share the detailed information at parent-teacher night.

With guidance, each student prepared a package that included

- the student's self-assessment based on the "self-assessment criteria"
- the teacher's assessment of the student's work linked to the outcomes-based criteria for operations with fractions
- examples of student work as evidence for the statements, with reflections by the student
- notes about growth made by the student and the teacher
- ideas for work at home

While assembling the packages, Clifford said, *"You know, some of us think that we should have a celebration of our work."* Paul and Christine agreed, and during the next session they guided the class in drafting the invitation, preparing a display and presentations, and organizing a process for parents to participate in math.

*Invitation to Parents to Share in Our Math Learning*

*We invite you to join us this Friday afternoon in a celebration of learning about fractions. The students have been preparing packages of their work and reflections to share with you. There will also be demonstrations and presentations that we hope will provide you with deeper insight into what we have learned.*

On Friday the room was buzzing. Each student shared his or her package of material with his or her parents. Some students made presentations for groups of parents about aspects they found interesting in what they had learned about their learning. These presentations revealed how different the learning process was for different students.

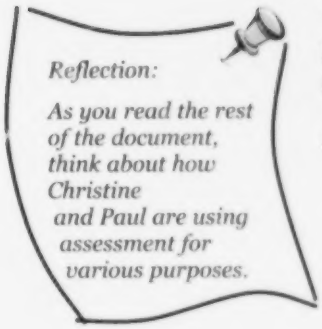
Saad and Sam both spoke about how they could use mathematical language to describe what they were doing, and about how they had very different ways of understanding their work with fractions. Saad worked with the numbers and Sam "saw" the relationships. Penny shared how important it was to consider a range of alternatives. As she said, *"There may be several ways to do something, and when you think about all of them, you can see advantages and disadvantages and make better choices. Just knowing the rules isn't enough. You have to use the 'reasonableness test' to check your solutions, as well as the rules."*

In the following week, Paul and Christine met to review the activities of the past few weeks. *"Well, that was a successful start to our journey in differentiating learning,"* said Paul. *"Seeing the look on Saad's father's face was worth it all."*

*"And hearing Sam confidently using mathematical language to explain the way in which he sees relationships was also worth it,"* replied Christine. *"We have to credit Sam for steering us toward this learning journey. It's amazing how focussing on each student's learning can accomplish so much. Now we really have to keep going with this. And find a way to do this in all subject areas."*

*Reflection:*

*What implications of the approaches in this vignette do you see for student learning in your classes?*


*Reflection:*
*As you read the rest of the document, think about how Christine and Paul are using assessment for various purposes.*

*"And a way to share it with our colleagues,"* Paul added. *"Let's write a formal reflection on the whole process, what worked and what didn't, and present our research to the rest of the staff."*

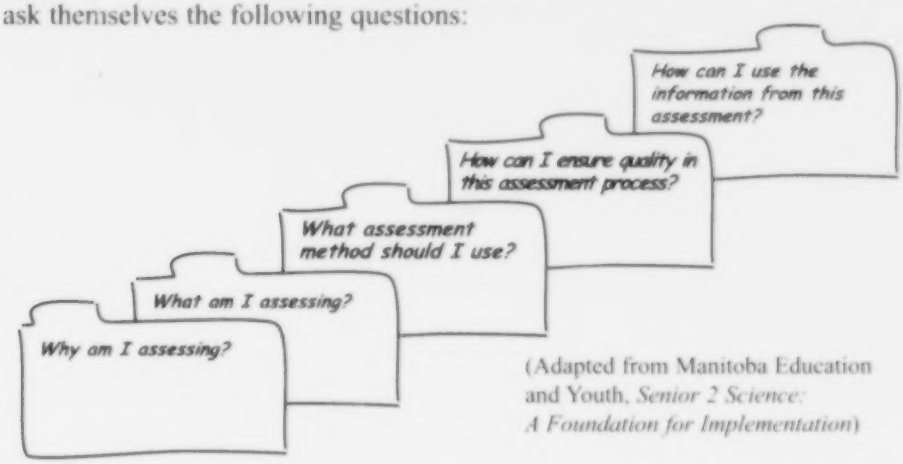
At the next staff meeting, they shared their story. And the process continued.

# Three Purposes of Assessment

Section II

Thinking about assessment from the perspective of purpose rather than method puts the emphasis on the intended end result. The chapters in this section describe in detail three different assessment purposes: assessment *for* learning (Chapter 3); assessment *as* learning (Chapter 4); and assessment *of* learning (Chapter 5). The order (*for, as, of*) is intentional, indicating the importance of assessment *for* learning and assessment *as* learning in enhancing student learning. Assessment *of* learning should be reserved for circumstances when it is necessary to make summative decisions.

In planning, developing, and using assessment methods that are "fit for purpose," teachers think about curriculum and about their students as they ask themselves the following questions:


Why am I assessing?
What am I assessing?
What assessment method should I use?
How can I ensure quality in this assessment process?
How can I use the information from this assessment?

(Adapted from Manitoba Education and Youth, *Senior 2 Science: A Foundation for Implementation*)

These questions are used throughout Section II to show the key planning considerations in designing assessment.

## Key Ideas in Section II

- Classroom assessment is used for various purposes: assessment *for* learning, assessment *as* learning, and assessment *of* learning.
- Each of these purposes requires a different role for teachers, different planning, and raises different quality issues.
- The most important part of assessment is the interpretation and use of the information that is gleaned for its intended purpose.

# Chapter 3

# Assessment *for* Learning

## What Is Assessment *for* Learning?

*Reflection:*

*Think about an example of assessment* ***for*** *learning in your own teaching and try to develop it further as you read this chapter.*

Assessment *for* learning occurs throughout the learning process. It is designed to make each student's understanding visible, so that teachers can decide what they can do to help students progress. Students learn in individual and idiosyncratic ways, yet, at the same time, there are predictable patterns of connections and preconceptions that some students may experience as they move along the continuum from emergent to proficient. In assessment *for* learning, teachers use assessment as an investigative tool to find out as much as they can about what their students know and can do, and what confusions, preconceptions, or gaps they might have.

The wide variety of information that teachers collect about their students' learning processes provides the basis for determining what they need to do next to move student learning forward. It provides the basis for providing descriptive feedback for students and deciding on groupings, instructional strategies, and resources.

## Teachers' Roles in Assessment *for* Learning

Assessment *for* learning occurs throughout the learning process. It is interactive, with teachers

- aligning instruction with the targeted outcomes
- identifying particular learning needs of students or groups
- selecting and adapting materials and resources
- creating differentiated teaching strategies and learning opportunities for helping individual students move forward in their learning
- providing immediate feedback and direction to students

**Resource:**
Assessment Reform Group, *Assessment for Learning Beyond the Black Box*

Teachers also use assessment *for* learning to enhance students' motivation and commitment to learning. When teachers commit to learning as the focus of assessment, they change the classroom culture to one of student success. They make visible what students believe to be true, and use that information to help students move forward in manageable, efficient, and respectful ways.

**Using Questioning in Class to Expose Learning**

In a study done in England, Black and Harrison (1991) worked with teachers to change their questioning in ways that could help students learn. By structuring the questioning to include a longer wait time and by expecting every student to be prepared to answer at any time (even if it was to say "I don't know"), the teachers found that more students were involved in the discussion, there was an increase in the sophistication of their contributions, and teachers were able to create a climate of inquiry in which all members of the group, not just the eager responders, were working together to explore ideas and alternatives, not merely to find the "right" answer.

By carefully framing questions to challenge students' thinking and to examine issues that are critical to the development of students' understanding of complex ideas, teachers could gather detailed information about student beliefs, preconceptions, and alternative perspectives, and more students were engaged. They found that questioning can be a powerful tool in assessment for learning. Some examples of "questions worth asking" are:

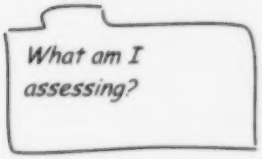
- What would a penny tell future generations about our civilization?
- Is gravity a fact or a theory? What evidence supports your answer?
- In what ways are the animals in the story like humans? In what ways are they not like humans?
- If plants need sunlight to make food, do you think the biggest plants would grow in the desert? Why?
- Describe what you think is the temperature of the poem.
- What do you suspect happened to the slain knight? Why?

Students' understanding can be exposed not only through their responses to the teacher's questions, but also through the questions they formulate to advance their understanding.

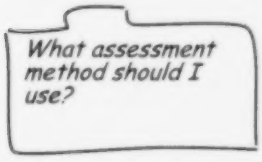
## Planning Assessment *for* Learning

*Why am I assessing?*

When the intent is to enhance student learning, teachers use assessment *for* learning to uncover what students believe to be true and to learn more about the connections students are making, their prior knowledge, preconceptions, gaps, and learning styles. Teachers use this information to structure and differentiate instruction and learning opportunities in order to reinforce and build on productive learning, and to challenge beliefs or ideas that are creating problems or inhibiting the next stage of learning. And they use this information to provide their students with descriptive feedback that will further their learning.

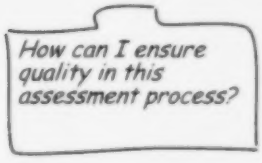



Teachers use the curriculum as the starting point in deciding what to assess, and to focus on why and how students gain their understanding. Assessment *for* learning requires ongoing assessment of the curriculum outcomes that comprise the intended learning. Teachers create assessments that will expose students' thinking and skills in relation to the intended learning, and the common preconceptions.




Teachers use focussed observations, questioning, conversations, quizzes, computer-based assessments, learning logs, or whatever other methods are likely to give them information that will be useful for their planning and their teaching (see Fig. 2.2, Assessment Tool Kit, page 17). Each time a teacher plans an assessment *for* learning, he or she needs to think about what information the assessment is designed to expose, and must decide which assessment approaches are most likely to give detailed information about what each student is thinking and learning.

The methods need to incorporate a variety of ways for students to demonstrate their learning. For example, opportunities for students to complete tasks orally or through visual representation are important for those who are struggling with reading, or for those who are new English-language learners.




Assessment *for* learning is of high quality when a teacher can use it to make decisions about students' learning with enough specificity to be able to provide descriptive feedback, and to design the next stage of learning.

### *Reliability*

Because assessment *for* learning focusses on the nature of students' thinking and learning at any given point in time, and is used to determine the next phase of teaching and learning, reliability depends on the accuracy and consistency of teachers' descriptions of the learning. Teachers will want to be sure that they are

actually getting a clear picture of how the students are thinking and what it is that they understand or find confusing. A single assessment is rarely sufficient to produce detailed insights into students' learning. Instead, teachers use a range of assessments in different modes (e.g., oral, visual, active, written), and do them at different times to develop a rolling picture of the student's progress and development. Teachers are always looking for evidence and descriptions of each student's way of understanding the concepts.

**Resource:**
*Gipps, Beyond Testing: Toward a Theory of Educational Assessment*

One of the best ways for teachers to gain reliable insights into how students are thinking is to work with other teachers. When teachers share their views about students' work and the nature and quality of the learning in relation to curriculum outcomes, they gain consistency and coherence in their descriptive accounts, and they can feel more confident about the final decisions and next steps in teaching.

### *Reference Points*

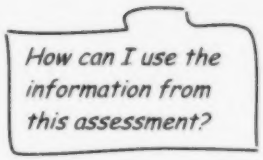
Curriculum learning outcomes or, for some students, learning outcomes of an individualized learning plan, are the reference points for assessment *for* learning. They serve as guides in providing feedback and in planning instruction. Learning expectations that are clear and detailed, with exemplars and criteria that differentiate the quality and the changes along the learning continuum, enable teachers to accurately consider each student's work in relation to these expectations.

### *Validity*

Validity in assessment *for* learning is all about how well assessment can shed light on students' understanding of the ideas that are contained in the learning outcomes and in the effectiveness of the choices and the guidance that the teacher provides for the next stage of learning. Teachers can judge the validity of their assessment processes by monitoring how well their assessment shows the progress of students' learning along the continuum of the curriculum.

### *Record-Keeping*

Record-keeping is an important part of ensuring quality in assessment *for* learning. Teachers keep detailed notes, not for making comparative judgements among the students, but to provide each student with individualized descriptive feedback that will help further that student's learning. Good record-keeping will show whether the student work is on track and, when it is not, raise questions about the instruction and ways it could be adjusted. The focus of record-keeping in assessment *for* learning is on documenting individual student learning and annotating it in relation to the continuum of learning. The focus is also on identifying groups of students with similar learning patterns so that instruction can be efficiently differentiated. Teachers' records need to be based on the curriculum learning outcomes, and need to give detailed accounts of student accomplishments in relation to these outcomes, with evidence to support these accounts.




## Feedback to Students

**Evaluative and Descriptive Feedback**

***Evaluative Feedback***

- judgements of value or appropriateness of responses
- judgements of correctness or incorrectness

***Descriptive Feedback***

- descriptions of why a response is appropriate
- descriptions of what students have achieved
- suggestions of a better way of doing something
- prompts to suggest ways students can improve

(Adapted from Gipps et al., ***What Makes a Good Primary School Teacher? Expert Classroom Strategies***)

Descriptive feedback is the key to successful assessment *for* learning. Students learn from assessment when the teacher provides specific, detailed feedback and direction to each student to guide his or her learning. Feedback for learning is part of the teaching process; the part that comes after the initial instruction takes place, when information is provided about the way that the student has processed and interpreted the original material. It is the vital link between the teacher's assessment of a student's learning and the action following that assessment.

To be successful, feedback needs to be immediate and identify the way forward. It should not simply tell learners whether their answers are right or wrong, or simply provide evaluative feedback in the form of grades and short, non-specific comments of praise or censure. This latter kind of feedback affects students' senses of themselves and tells them how they stand in relation to others, but it offers very little direction for moving forward. Feedback for learning, on the other hand,

**Feedback for Learning**

Ten of Winnipeg's inner-city schools have adopted Feedback for Learning strategies with the goal of improving achievement and meta-cognitive development. The strategies highlight the need to pay attention to learning styles, whatever the age of the learner. School staff are encouraged to use simple scaffolding to support and sustain changes in teaching habits. Scaffolding starts with the clarification of teachers' learning expectations, moves on to students' self- and peer critique, and culminates in students presenting their progress and achievement. The scaffolding is applicable in all content areas, and is as relevant to adult learning and leadership as it is in the classroom.

**An Example of "Closing the Gap" Feedback Prompts**

In introducing a character for a story (written or oral), let's assume that a student has described someone he knows from a summer camp. After highlighting several phrases that give information about this person, the teacher highlights the student's phrase "This person is a good friend" and considers a closing-the-gap prompt. The prompt could take any of the following forms:

- A reminder prompt: E.g., "Say more about how you feel about this person." (A reminder prompt is most suitable for a student who has good command of figurative language but has not used it here, for whatever reason. )
- A scaffolding prompt: E.g. "Can you describe how this person is a good friend"?; "Describe something that happened that showed you what a good friend this person is"; "He showed me he was a good friend when...". (Scaffolding prompts work well with students who need more structure or some direction but are likely to carry on from here.)
- An example prompt: E.g., "Choose one of these statements to tell me more about your friend. "He is a good friend because he never says unkind things about me." Or, "My friend helps me do things." (When a student is struggling or doesn't appear to understand the concept, example prompts can provide them with actual models of the learning intention.)

(Adapted from Earl, ***Assessment as Learning: Using Classroom Assessment to Maximise Student Learning***)

is descriptive and specific. Descriptive feedback makes explicit connections between students' thinking and the learning that is expected. It addresses faulty interpretations and lack of understanding. It provides the student with manageable next steps and an example of what good work looks like.

Feedback for learning provides evidence that confirms or challenges an idea that a student holds. It gives recognition for achievement and growth, and it includes clear directions for improvement. It encourages students to think about, and respond to, the suggestions. And it focusses on both quality and learning.

**Resource:**
Tomlinson, *The Differentiated Classroom: Responding to the Needs of All Learners*

### *Differentiating Learning*

Assessment *for* learning provides information about what students already know and can do, so that teachers can design the most appropriate next steps in instruction. When teachers are focussed on assessment for learning, they are continually making comparisons between the curriculum expectations and the continuum of learning for individual students, and adjusting their instruction, grouping practices, and resources. Each student can then receive the material, support, and guidance that he or she needs to progress, without experiencing unnecessary confusion and frustration. By carefully planning and targeting what they do to help each student, teachers can reduce the misunderstandings and provide just-in-time support for the next stage of learning, and streamline and speed up the learning process.

*Reflection:*

*How have you used assessment to determine the differences in your students' learning needs? How did this influence the instruction that followed?*

**The Pool Table Task**

At the beginning of the school year, a Middle Years mathematics teacher used a series of games that he had devised to give him insights into his students' knowledge and depth of understanding. One of these games used a modified pool table to help him ascertain the students' conceptions of algebraic relationships, either formally or intuitively.

He gave the students a graphic of a four-pocket pool table and told them that the ball always leaves pocket A at a 45° angle, rebounds off a wall at an equal angle to that at which the wall was struck, and continues until it ends up in a pocket. Students counted the number of squares the ball passed through as well as the number of hits the ball made, the first and last hit being the starting and finishing pockets. They experimented with tables of various dimensions and recorded their observations on a chart formatted as follows:

| Length | Width | Number of Hits | Number of Squares |
|---|---|---|---|
| 6 | 4 | 3 | 12 |
| 3 | 5 | 8 | 15 |
| 5 | 4 | | |

As the students gathered data, they began to make predictions based on the patterns they observed. Some made general statements like "You can tell the number of hits by adding the width and the length together and dividing by their greatest common factor." Or "The number of squares that the ball goes through is always the lowest common multiple of the width and the length." Others continued to count to find the answers without seeing the relationships that existed.

During this task, the teacher observed and made notes about the thinking of individual students. He stopped and asked questions about the process that they were using, and prompted them to think about patterns and to take a chance at making predictions based on the patterns they observed. From the information gathered during this process, he made decisions about how to teach the next series of lessons and how to group the students for the various instructional elements to come. Some students were quickly able to understand an algebraic equation that symbolized the general patterns that they had identified. For others, he used a number of exercises that helped them identify the patterns and formulate them in concrete ways. It was essential that they be guided through the concrete experience before moving to the abstract representation. The pool table task gave him a window into the students' thinking and a starting point for planning instruction, resources, grouping, timing, and pacing.

(Adapted from Earl, ***Assessment as Learning: Using Classroom Assessment to Maximize Student Learning***)

### *Reporting*

Reporting in assessment *for* learning is based on open, frequent, and ongoing communication with students and their parents about progress in learning, methods that the teacher is using to ensure ongoing progress, and ways that students, teachers, and parents might help move learning forward with minimal misunderstanding and confusion for the student. The reports might focus on a single outcome but more often on a series, or cluster, of outcomes. Reporting should take into account what learning is expected, provide good models of what students can achieve, and identify strategies for supporting students.

**Reading and Writing in Geography: An Example of Keeping Parents Informed**

Dear parents:

Because we believe that it is important for students to become good readers and writers, in geography class we are highlighting reading and writing. We are emphasizing finding information in diverse non-fiction materials related to the geography topics that we are studying. We're also focussing on organizing material and ideas and presenting this clearly for audiences who may not necessarily be familiar with the topic.

During class, I read material to the students, they read material on their own, and they participate in discussions about the ideas. Students are expected to identify the main ideas, analyze the ideas from a range of perspectives, offer interpretations based on evidence from their reading, draw conclusions, and write a summary of their conclusions, with supporting evidence and arguments.

During this process, they share their opinions, ask questions, add new information, create pictures in their mind based on their reading and the discussions, and make judgements about the ideas.

You can help by reading non-fiction (magazines, newspapers, textbooks) with them at home and talking about key ideas, why the author might think the way he or she does, and what ideas might be missing.

After each class, students will be bringing home reading material that they are working on at school. This is meant to show you how they are progressing on their reading in this course, as well as their learning about geography.

If you have any questions or want more information, feel free to contact me at any time.

## An Example of Assessment *for* Learning

Karen, an experienced primary-grade teacher, reflected upon her students' growth in language arts over the term just completed. She had focussed her instruction on constructing meaning from texts, and her students were immersed in a wide variety of quality literature that was chosen to develop students' comprehension skills before, during, and after reading and listening. She observed that there was a wide distribution along the continuum of learning among the students in her classroom. For example, some students were noticing various authors' writing techniques, some were requiring much guidance in responding to texts, and some were showing interest in fairy tales. With this in mind, and to challenge the proficient writers and provide guided practice for those who were just emerging as writers, Karen decided to focus on the process of writing. She used differentiated instruction through assessment *for* learning to address the needs of all students in her classroom.

### Why am I assessing?

*I want to determine ways to differentiate instruction in order to help each student progress in his or her writing and make connections to his or her reading.*

Karen was interested in how her students expressed their ideas in writing, and how they made connections between the strategies that established authors use and their own writing. By assessing their thinking and writing processes, she was able to determine what specific instructional strategies would best advance each student's learning.

### What am I assessing?

*I am assessing my students' abilities to express their own ideas in writing and to appraise their own and other's writing.*

Karen targeted the following curriculum outcomes to focus her instruction and assessment *for* learning:

- Create Original Texts (to communicate and demonstrate understanding of forms)
- Generate Ideas (focus a topic for oral, written, and visual texts using a variety of strategies)
- Appraise Own and Others' Work (share own stories and creations in various ways with peers; give support and offer feedback to peers using pre-established criteria when responding to own and others' creations)
- Appreciate Diversity (connect the insights of individuals in oral, print, and other media text to personal experiences)

***What assessment method should I use?***

*I need an ongoing and focussed observation approach during regular classroom instruction and practice in which students share and reflect throughout the writing process, making their thinking and skills visible.*

With the goal in mind of having her students make connections between reading and writing, Karen focussed on a genre study of fairy tales and the process of writing. She gathered information about her students' learning by observing them and having conversations with them. She used the curriculum learning outcomes as the focus for her observations and her record-keeping.

Karen used a writers' workshop format so that she could balance whole-class instruction and work in flexible groupings. In the whole-class context, she used read-aloud and brainstorming methods to chart the strategies that established authors use to write fairy tales, modelled the writing process, and had students share their writing and self-assessments.

During these whole-class strategies, Karen identified dynamic flexible groupings, which allowed students to progress in various rhythms and at various rates toward independence. She determined which students would need to be guided through interactive writing, which learning centres would be appropriate for which students, and which students would move quickly into independent writing and the Author's Chair. The centres included a drama centre, with puppets and props, and a visual arts centre. The centres provided a forum in which emergent writers could generate and focus their ideas, and the more proficient writers could hone their skills in using imagery, description, and dialogue.

***How can I ensure quality in this assessment for learning process?***

*I can focus my observations on the targeted outcomes and criteria.*
*I can observe my students in a variety of contexts and tasks over time, and guide their portfolio choices.*
*I can keep accurate, effective, and manageable records that show each student's learning path.*

Karen knew that in order to guide her students toward the desired outcomes, she needed to provide clear criteria for high-quality work. Therefore, at the close of each workshop, she worked with the whole class to generate, revise, and refine a set of criteria. As her students gained more experience with the writing process and fairy tales, their reflections about and revisions of the criteria became more focussed. Based on the question, What does a quality fairy tale look and sound like?, the students decided that there are three elements in a good fairy tale: (1) it has an idea about wishes, magic objects, or trickery; (2) it has a problem to be solved; (3) it makes a connection to our community.

In order to manage her anecdotal records in an efficient and focussed way, Karen used a clipboard and notepaper formatted as follows.

| **Targeted Outcomes**<br>• Create Original Texts<br>• Generate Ideas<br>• Appraise Own and Others' Work<br>• Appreciate Diversity | **Criteria (student-generated)**<br>A quality fairy tale<br>• has an idea about wishes, magic objects, trickery<br>• has a problem to be solved<br>• makes a connection to our community | | | |
|---|---|---|---|---|
| | | **Assessment Context, Task, Product** | | |
| **Student Names** | **Date** | Read Aloud | Interactive Writing | Centres: visual art, drama (puppets, props), writing | Portfolio Reflections and Conversations |
| | | | | | |
| | | | | | |

*How can I use the information from this assessment?*

*I can provide descriptive feedback to students and parents about students' development as writers.*

*I can guide students in setting new and increasingly challenging goals.*

The process of sharing and reflection on the part of the students provided Karen with the opportunity to identify specific areas of need, which she then addressed through strategic instruction to the whole class, and to flexible groups, pairs, and individuals, to ensure that all students were experiencing success. She saw that the emergent writers experienced success as they developed their fairy tales through visual representations and drama performances. Karen highlighted these students' strengths in art and drama to help build their confidence, and to scaffold their writing skills while she modelled and guided them to write a group fairy tale. Another group of students began using descriptive language to add interest to their fairy tales, and she used the opportunity to teach a mini-lesson on using words to make "language pictures." Yet another group was experimenting with the use of dialogue in their first drafts, so she gave a mini-lesson on the use of quotation marks.

At the end of the unit, Karen and her students reflected upon their criteria for high-quality work and assessed the students' portfolios. They noticed that, with their successes, they were now ready to set new and more challenging learning goals. Karen and her students used the assessment information that she had gathered to share with parents, and to plan the next instruction to once again meet the various needs of her students along the continuum of learning.

# Summary of Planning Assessment *for* Learning

| | |
|---|---|
| **Why Assess?** | to enable teachers to determine next steps in advancing student learning |
| **Assess What?** | each student's progress and learning needs in relation to the curricular outcomes |
| **What Methods?** | a range of methods in different modes that make students' skills and understanding visible |
| **Ensuring Quality** | • accuracy and consistency of observations and interpretations of student learning<br>• clear, detailed learning expectations<br>• accurate, detailed notes for descriptive feedback to each student |
| **Using the Information** | • provide each student with accurate descriptive feedback to further his or her learning<br>• differentiate instruction by continually checking where each student is in relation to the curricular outcomes<br>• provide parents or guardians with descriptive feedback about student learning and ideas for support |

# Chapter 4

# Assessment *as* Learning

We must constantly remind ourselves that the ultimate purpose of evaluation is to enable students to evaluate themselves.

(Costa, "Reassessing Assessment")

## What Is Assessment *as* Learning?

Assessment *as* learning focusses on students and emphasizes assessment as a process of metacognition (knowledge of one's own thought processes) for students. Assessment *as* learning emerges from the idea that learning is not just a matter of transferring ideas from someone who is knowledgeable to someone who is not, but is an active process of cognitive restructuring that occurs when individuals interact with new ideas. Within this view of learning, students are the critical connectors between assessment and learning. For students to be actively engaged in creating their own understanding, they must learn to be critical assessors who make sense of information, relate it to prior knowledge, and use it for new learning. This is the regulatory process in metacognition; that is, students become adept at personally monitoring what they are learning, and use what they discover from the monitoring to make adjustments, adaptations, and even major changes in their thinking.

*Reflection:*

*Think about an example of assessment* ***as*** *learning in your own teaching and try to develop it further as you read this chapter.*

**Dimensions of Metacognition**

***Knowledge of Cognition***

- knowledge about ourselves as learners and what influences our performance
- knowledge about learning strategies
- knowledge about when and why to use a strategy

***Regulation of Cognition***

- planning: setting goals and activating relevant background knowledge
- regulation: monitoring and self-testing
- evaluation: appraising the products and regulatory processes of learning

(Adapted from Brown, "Metacognition, Executive Control, Self-Regulation, and Other More Mysterious Mechanisms")

Assessment *as* learning is based in research about how learning happens, and is characterized by students reflecting on their own learning and making adjustments so that they achieve deeper understanding. P. Afflerbach (2002) notes (in the context of reading assessment):

> Too many students have reading assessment done *to* them, or *for* them. Only reading assessment that is done *with* students and eventually *by* students can foster true independence and success in reading. Accomplished readers are flexible in their routines of metacognition and comprehension monitoring, as demanded by the particular act of reading. The ability to self-assess is multifaceted, and good readers apply their self-assessment strategies on demand (p. 99, emphasis added).

Although Afflerbach's comment is specifically about reading, it is applicable to many other areas of learning as well. Students become productive learners when they see that the results of their work are part of critical and constructive decision-making. If young people are to engage in continuous learning in environments where knowledge is always changing, they need to internalize the needing-to-know and challenging-of-assumptions as habits of mind.

**Monitoring Metacognition**

- What is the purpose of learning these concepts and skills?
- What do I know about this topic?
- What strategies do I know that will help me learn this?
- Am I understanding these concepts?
- What are the criteria for improving my work?
- Have I accomplished the goals I set for myself?

(Adapted from Schraw, "Promoting General Metacognitive Awareness")

The ultimate goal in assessment *as* learning is for students to acquire the skills and the habits of mind to be metacognitively aware with increasing independence. Assessment *as* learning focusses on the explicit fostering of students' capacity over time to be their own best assessors, but teachers need to start by presenting and modelling external, structured opportunities for students to assess themselves.

## Teachers' Roles in Assessment *as* Learning

A high level of student participation in the assessment process does not diminish teachers' responsibilities. Rather, assessment *as* learning extends the role of teachers to include designing instruction and assessment that allows all students to think about, and monitor, their own learning.

For students to be able to improve, they must develop the capacity to monitor the quality of their own work during actual production. This in turn requires that students possess an appreciation of what high-quality work is, that they have the evaluative skills necessary for them to compare with some objectivity the quality of what they are producing in relation to the higher standard, and that they develop a store of tactics or moves which can be drawn upon to modify their own work.

(Sadler, "Formative Assessment and the Design of Instructional Systems")

Assessment *as* learning is based on the conviction that students are capable of becoming adaptable, flexible, and independent in their learning and decision-making. When teachers involve students and promote their independence, they are giving them the tools to undertake their own learning wisely and well.

To become independent learners, students must develop sophisticated combinations of skills, attitudes, and dispositions. Self-monitoring and

evaluation are complex and difficult skills that do not develop quickly or spontaneously. Like any other complex set of skills, becoming metacognitively aware requires modelling and teaching on the part of the teacher, and practice on the part of the student.

The teacher's role in promoting the development of independent learners through assessment *as* learning is to

- model and teach the skills of self-assessment
- guide students in setting goals, and monitoring their progress toward them
- provide exemplars and models of good practice and quality work that reflect curriculum outcomes
- work with students to develop clear criteria of good practice
- guide students in developing internal feedback or self-monitoring mechanisms to validate and question their own thinking, and to become comfortable with the ambiguity and uncertainty that is inevitable in learning anything new
- provide regular and challenging opportunities to practise, so that students can become confident, competent self-assessors
- monitor students' metacognitive processes as well as their learning, and provide descriptive feedback
- create an environment where it is safe for students to take chances and where support is readily available

Students need to experience continuous and genuine success. This does not mean that students should not experience failure but, rather, that they need to become comfortable with identifying different perspectives and challenge these perspectives; they need to learn to look for misconceptions and inaccuracies and work with them toward a more complete and coherent understanding.

> Wise teachers use the classroom assessment process as an instructional intervention to teach the lesson that failure is acceptable at first but that it cannot continue. Improvement must follow. Success is defined as continual improvement. To teach these lessons, we can use student involvement in the assessment, record-keeping, and communication process.
>
> (Stiggins, "Assessment, Student Confidence, and School Success")

Students (both those who have been successful—in a system that rewards safe answers—and those who are accustomed to failure) are often unwilling to confront challenges and take the risks associated with making their thinking visible. Teachers have the responsibility of creating environments in which students can become confident, competent self-assessors by providing emotional security and genuine opportunities for involvement, independence, and responsibility.

> Our students must understand that, when we try to grow, we sometimes fail at first, and that failure is all right. The trick is to help students understand that failure holds the seeds of later success.
>
> (Stiggins, "Assessment, Student Confidence, and School Success")

**A Nunavut Example of Reflection and Decision-Making**

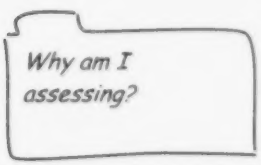
In Nunavut, cultural sensitivity is required on the part of teachers in almost every aspect of program planning. As part of a secondary wellness module, students work together on a class project related to the traditional Inuit principle of ***Avatimik Kamattiarniq*** (environmental stewardship). Keeping the environment clean, using every part of what was killed, and conserving energy were essential attitudes and survival skills of Inuit culture, taught by Elders to young children and maintained, refined, and elaborated upon throughout their lives.

The class project requires that students collaborate to select an activity that demonstrates an understanding of ***Avatimik Kamattiarniq*** and take a step toward it. After completing a community mapping activity that focusses on this principle, students explore what their community does in relation to this principle and what ideas they might have to improve the quality of life and their stewardship of the environment.

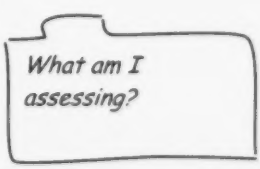
In selecting the class project, the students may bring in Elders to provide ideas. They discuss their options so that everyone understands what is involved in making a decision together. Decision-making by consensus is a difficult undertaking, requiring participants to pay close attention to the ideas shared and to show an understanding of who and what can influence decisions.

Students are encouraged to think about their individual understanding of the process of collaboration and decision-making by consensus and how these principles relate to ***Avatimik Kamattiarniq***. The students are instructed to reflect individually on the conceptual, social, and personal aspects of what they are learning. The conceptual aspect is based on the principle of environmental stewardship; the social aspect includes an analysis of the group's ability to use collaboration and consensus decision-making to accomplish the task; and the personal aspect prompts each student to assess his or her own learning and role in the process.

## Planning Assessment *as* Learning




In order to know what steps to take to support students' independence in learning, teachers use assessment *as* learning to obtain rich and detailed information about how students are progressing in developing the habits of mind and skills to monitor, challenge, and adjust their own learning. For their part, students learn to monitor and challenge their own understanding, predict the outcomes of their current level of understanding, make reasoned decisions about their progress and difficulties, decide what else they need to know, organize and reorganize ideas, check for consistency between different pieces of information, draw analogies that help them advance their understanding, and set personal goals.




In assessment *as* learning, teachers are interested in how students understand concepts, and in how they use metacognitive analysis to make adjustments to their understanding. Teachers monitor students' goal-setting process and their

thinking about their learning, and the strategies students use to support or challenge, adjust, and advance their learning.

**Mathematics Portfolio Letter**

At the beginning of the term, the students in a Senior Years mathematics class write a letter to the teacher about their past experiences with mathematics, their expectations, how best they learn in mathematics, and how best the teacher can help them.

First they are asked to discuss their previous mathematics experiences, with attention to

- how they learn mathematics best (working alone, working with others, using concrete materials, reading about the solutions)
- what they like and don't like about mathematics

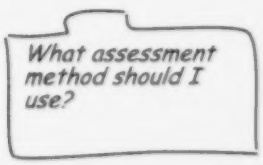
Then they are asked to describe their expectations for learning in this class by identifying

- what they want to learn
- what they need from the teacher as support to help them learn

This initial self-reflection provides the teacher with insight into students' learning styles, their engagement with learning, and their ability to analyze their own learning.

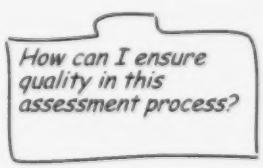
Periodically during the course, students review their initial letters and write follow-up letters to the teacher that include

- a description of the extent to which their expectations for this class have so far been met
- feedback on the kinds of teaching and resources that helped them learn mathematics
- a description of what they have learned about themselves as learners




Teachers can use a range of methods in assessment *as* learning (see Fig. 2.2, Assessment Tool Kit, page 17), as long as the methods are constructed to elicit detailed information both about students' learning and about their metacognitive processes. Teachers teach students how to use the methods so that they can monitor their own learning, think about where they feel secure in their learning and where they feel confused or uncertain, and decide about a learning plan.

Although many assessment methods have the potential to encourage reflection and review, what matters in assessment *as* learning is that the methods allow students to consider their own learning in relation to models, exemplars, criteria, rubrics, frameworks, and checklists that provide images of successful learning.




Quality in assessment *as* learning depends on how well the assessment engages students in considering and challenging their thinking, and in making judgements about their views and understanding. Teachers establish high quality by ensuring

that students have the right tools and are accumulating the evidence needed to make reasonable decisions about what it is that they understand or find confusing, and what else they need to do to deepen their understanding.

### *Reliability*

Reliability in assessment *as* learning is related to consistency and confidence in students' self-reflection, self-monitoring, and self-adjustment. As students practise monitoring their own learning and analyzing it in relation to what is expected, they eventually develop the skills to make consistent and reliable interpretations of their learning. In the short term, however, teachers have the responsibility of engaging students in the metacognitive processes. They do this by scaffolding students' understanding; providing criteria, exemplars, and resources to help them analyze their own work; teaching them the necessary skills to think about their own learning in relation to their prior understanding and the curricular learning outcomes; and gathering evidence about how well they are learning.

**Resource:**
Gregory, Cameron, and Davies, *Setting and Using Criteria: For Use in Middle and Secondary School Classrooms*

### *Reference Points*

The reference points in assessment as learning are a blend of curricular expectations and the individual student's understanding at an earlier point in time. Students compare their own learning over time with descriptions and examples of expected learning.

### *Validity*

Students are able to assess themselves only when they have a clear picture of proficient learning and the various steps that need to be taken to attain the desired expertise. Students need clear criteria and many varied examples of what good work looks like, as well as opportunities to compare their work to examples of good work. They need to reflect on their own and others' work in the context of teacher feedback and advice about what to do next.

> The student knows more than the teacher about what and how he has learned—even if he knows less about what was taught. (Elbow, ***Writing without Teachers***)

### *Record-Keeping*

Students are the key players in record-keeping, as they are in all the other components of assessment *as* learning. They need to develop skills and attitudes that allow them to keep systematic records of their learning, and these records need to include reflections and insights as they occur. Their individual records become the evidence of their progress in learning and in becoming independent learners.

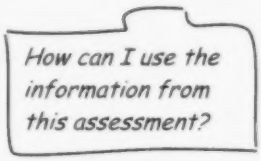
**Nutrition Notes: An Example of Students as Record Keepers**

A unit on healthy living is integrated into Grade 9 health classes throughout the year. Each student keeps a journal of data, hypotheses, conclusions, goals for improvement, questions for further inquiry, and interesting ideas that arise from class discussions about healthy living.

During a class discussion about nutrition, the students decide that they will each keep a record chart of everything that they eat each day for a week and use tables from a nutrition magazine to determine their weekly intake of calories, fats, carbohydrates, and so on.

At the next class discussion, they review their charts and decide what else they need to know about the ways diet affects their health. They agree that exercise is an important factor that has bearing on the amount and kinds of food a person requires. They decide to also keep a record of their patterns of exercise then estimate the kilojoules of energy expended in their weekly exercise.

During discussions throughout the term, they use the information they have gathered to make predictions, challenge hypotheses, and add new ideas, new data, and new questions to the discussion. Near the end of the term, the students each review their journals and design a poster, video clip, or short presentation to show the key dimensions of healthy living and the relationships among them. They also create a chart of their personal health goals, their milestones, their greatest challenges in progressing toward their goals, and their insights on what they learned about themselves.




Students use assessment *as* learning to gain knowledge about their progress, show milestones of success that are worthy of celebration, adjust their goals, make choices about what they need to do next to move their learning forward, and advocate for themselves.

**Metacognition in Action**

A technology teacher starts each new piece of work by explaining how it connects with what students have done before, and what, specifically, she wants the students to be able to do when they've finished the unit.

At the end of the unit, each student completes an assessment record that lists the criteria, trying to be specific about what they have learned and with what they have had trouble. The teacher adds comments to reinforce and extend the student's views. The teacher and the student together suggest a specific next step. The records are kept in the students' folders so that they are accessible to the teacher and to the students.

(Adapted from Sutton, ***Assessment for Learning***)

### *Feedback to Students*

Feedback is particularly important in assessment *as* learning. Learning is enhanced when students see the effects of what they have tried, and can envision alternative strategies to understand the material. When feedback enhances understanding and provides models for independent learning, students tend to be diligent and more engaged. Although assessment *as* learning is designed to develop independent learning, students cannot accomplish it without the guidance and direction that comes from detailed and relevant feedback. Students need feedback to help them develop autonomy and competence. Complex skills, such as monitoring and self-regulation, become routine only when there is constant feedback and practice using the skills. Effective feedback challenges ideas, introduces additional information, offers alternative interpretations, and creates conditions for self-reflection and review of ideas. It provides students with information about their performance on a task, and how they could come to the conclusions on their own.

**Looking for Language Clues**

Jean, a Grade 2 teacher, teaches a balanced literacy program based on a concept of learning to read that includes attention to word, sentence, and text features. He integrates these various dimensions of reading into the work that his students do during the entire day.

Jean tells the students that they are all part of an investigation of a mystery: The Mystery of the English Language. Throughout the day, Jean provides the students with "clues" (checklists and rubrics) that he (as the "lead investigator") uses in order to learn more about how the English language works. There are predictable clues and there are "doozies" (places where the rules don't work).

Every morning, Jean's class plays a game called Looking for Language Clues. Each student has a small, coloured plastic "language box." Before the school day begins, Jean puts an assignment in each box, based on the previous day's work, and hides the boxes in various places around the room. When the students arrive, they search for their boxes and use the evidence and the clues to rethink their work from the day before. The box contains material that they produced during the previous day, along with a set of clues that they can use to analyze their work and develop a plan for the current day's language investigation. The students can work on their own or they can call on their "investigation team" to help them.

This strategy allows Jean to prepare specific assessment tasks for each student (although a number of students may get the same clues) and use the clues to provide feedback and scaffold ideas for the student. Before embarking on an action plan, each student takes his or her plan to the lead investigator for discussion, refinement, and approval. This discussion leads to assignments for the day. The process of feedback and reflection continues the next day.

If all feedback does is provide direction for what students need to do—that is, if the feedback doesn't refer to students' own roles in moving forward to the next stage of learning—they will be perpetually asking questions like Is this right? Is this what you want? Rather, feedback in assessment *as* learning encourages students to focus their attention on the task, rather than on getting the answer right. It provides them with ideas for adjusting, rethinking, and articulating their understanding, which will lead to another round of feedback and another extension of learning.

**Thinking about Composition**

The students in a Senior Years art class have been learning about principles of composition using various painting techniques. One of the main themes of the unit is that these principles are not rules but, rather, guidelines for thinking about what works and what doesn't.

One of the students, Joanne, is reflecting on the various watercolour paintings that she completed in the class and has drafted the following reflection questions:

- Colour and technique: Are the colours I've used consistent with the mood I want to create? Where is the colour climax, or focus, in this painting? Where is the colour value most intense? How does the technique influence the mood?
- Unity, dominance, and conflict: What mood do I want to project? What is the focal point? Where is the tension? What creates the tension? Should there be a resolution?
- Repetition, balance, and harmony: Does this painting need symmetry or asymmetry? How does the eye move? Is there a sense of completion?

As Joanne reviews her portfolio, she not only answers the questions that she has posed, but also adds new questions.

Although teachers are the main providers of feedback, they are not the only ones. Peers, family, and community members also are important players. Students learn a great deal within their families and their communities. When students encounter new information, they filter it through their existing beliefs and ideas and those of their community and culture. They compare the new information to the beliefs and ideas held by the people around them.

### *Differentiating Learning*

When assessment lies in the hands of students as well as teachers, students are practising their own metacognitive skills of self-reflection, self-analysis, interpretation, and reorganization of knowledge. When these skills become well-developed, students will be able to direct their own learning. They will have

learned to ask for support, search out new information, and reinforce or challenge their decisions by reviewing and discussing them with others. Assessment *as* learning provides the conditions under which students and teachers can discuss what the students are learning, what it means to do it well, what the alternatives might be for each student to advance his or her learning, what personal goals have been reached, and what more challenging goals can be set.

### *Reporting*

**Resource:**
Davies, Cameron, Politano, and Gregory, *Together Is Better: Collaborative Assessment, Evaluation, and Reporting*

Reporting in assessment *as* learning is the responsibility of students, who must learn to articulate and defend the nature and quality of their learning. When students reflect on their own learning and must communicate it to others, they are intensifying their understanding about a topic, their own learning strengths, and the areas in which they need to develop further.

Student-led parent-teacher conferences have become a popular reporting forum that fits with assessment *as* learning. However, the success of these conferences depends on how well they are structured and how well the students prepare. The students need to have been deeply involved in assessment *as* learning throughout the instructional process, and be able to provide their parents with evidence of their learning. The evidence needs to include an analysis of their learning progress and what they need to do to move it forward.

**Conferences for Learning**

For several years, the students in George's Grade 6 class have used student-led conferences to communicate with parents. George was not completely happy with the conferences, even though the parents seemed to like them. He decided to meet with groups of students and parents about improving the conferences, and the discussions led to some significant changes:

- They shifted the focus from a student's accomplishment at one point in time to a combination of accomplishments and progress. The students kept detailed records of their progress in relation to key outcomes, and attached evidence that supported their statements. Part of the conference was dedicated to a review of the evidence and the student's decision-making process about what to do next.
- The parents asked for more information about what the students were doing in class throughout the term and about the criteria that they and the teachers were using to evaluate their work, so George began preparing a short weekly Internet newsletter that gave parents information about what was expected and included various examples of what good work looks like.
- George asked that each student conduct an in-class "dress rehearsal" in the final weeks before the conference as an opportunity for the students to explain what they were trying to communicate, to get feedback from peers and from George, and to ask questions designed to refine their presentations.
- On conference night, George was able to take the time to meet with each parent and his or her child because he had already seen all of the presentations. The students led the discussions, talked about what would come next at school and at home, and, together with the teacher and parent, completed the term report card with an attachment that contained more detailed notes about what had emerged from the conference.

## An Example of Assessment *as* Learning

Sheila recently began working with her students on solving complex problems in various subject areas. She knew that one of the key factors for success in solving problems independently is persistence. She also knew that students must learn to think explicitly about their own approaches to problems, and become comfortable with trying a range of possibilities.

> ***Why am I assessing?***
>
> *I want to help my students develop increased awareness of their approaches to problem-solving and their level of persistence so that they can advance their learning in a variety of contexts.*

Solving complex problems requires students to take risks in their thinking, and to explore different options. Ultimately, when faced with new situations, they need to be able to develop solutions on their own.

> ***What am I assessing?***
>
> *I am assessing my students' abilities to monitor their own thinking processes and their strategies for persisting when solving complex problems.*

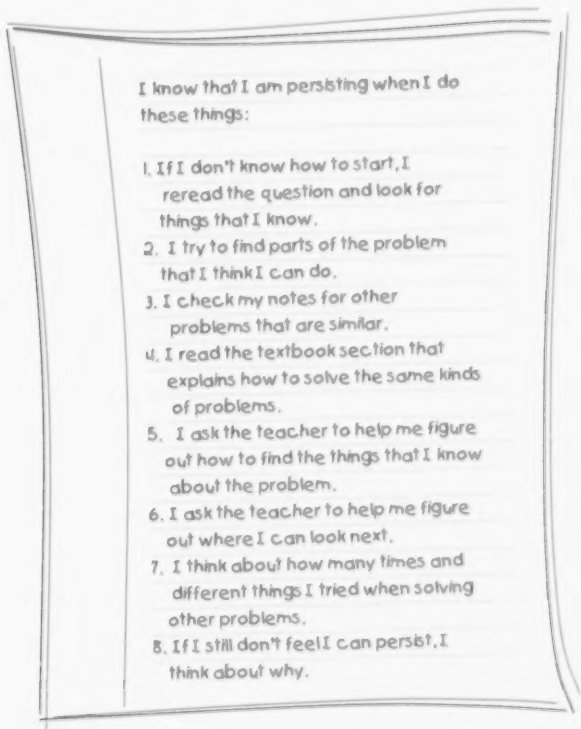
Sheila wanted to help her students understand how to approach a problem, and to recognize the kinds of thinking they need to do before finding a solution (or giving up). She knew that, if the students increased their self-awareness, they would be able to draw on more strategies for enhancing their learning and independence in problem-solving.

### *What assessment method should I use?*

*Students need frequent opportunities to think about and monitor their level of persistence when faced with difficult problems. They also need the tools to articulate their efforts. The method will need to elicit evidence of their learning and metacognitive processes. I will need to observe the students working and sharing their reflections, and converse with them about their learning.*

Sheila realized that she needed to create a safe and supportive environment for open dialogue and self-assessment. She knew that developing metacognition and persistence in problem-solving strategies is complex, and needed to be developed over the course of the school year. To help students monitor their progress, she had each keep an ongoing record in a learning log of his/her reflections, and she kept her own record of conversations and focussed observations as the students worked in small groups and whole-class settings. In order to make her observations and conversations manageable, she focussed on three students at a time.

To initiate the exploration of persistence in problem-solving, Sheila discussed with the students her expectations and the value of persistence in problem-solving. She provided some examples of what persistence looks like and how students would know when they had given up too soon on a problem. She had students list in their learning logs how they recognized when they were persisting and when they were not. Here is a sample from one student's log.



I know that I am persisting when I do these things:

1. If I don't know how to start, I reread the question and look for things that I know.
2. I try to find parts of the problem that I think I can do.
3. I check my notes for other problems that are similar.
4. I read the textbook section that explains how to solve the same kinds of problems.
5. I ask the teacher to help me figure out how to find the things that I know about the problem.
6. I ask the teacher to help me figure out where I can look next.
7. I think about how many times and different things I tried when solving other problems.
8. If I still don't feel I can persist, I think about why.

*How can I ensure quality in this assessment process?*

*I need to be sure that the students recognize what persistence looks like when solving a complex problem, and that they are making reasonable and consistent judgements about their own persistence.*

*I need to ensure that my students keep a relevant record of the self-assessment of their persistence when solving complex problems. This record needs to be kept over time to show change.*

Sheila engaged the students in a discussion about the characteristics of persistence that they had listed in their logs, and how these play out in a range of problem-solving situations, in school and outside school. During the discussions, she recorded these characteristics in a long list. Together, they refined the list by sorting and grouping. They ended up with a few succinct criteria that they all agreed described what persistence looks like in any problem-solving situation. Here are the criteria they developed together.

**Our Criteria for Persistence in Problem-Solving**

- I reread the problem carefully and several times in order to fully understand it.
- I break the problem into parts to find out what I know, and what information I need to find.
- I check notes, books, and other resources to find ideas that might be useful in solving the problem.
- I ask other people focussed questions to try to find helpful ideas (but I do not ask for the solution).
- I draw diagrams or use objects as models to think about the problem in many ways.

The students used these criteria as a guide when problem-solving and reflecting on the problem-solving processes. Sheila used the criteria to guide her observations of the students as they worked at solving complex problems and shared their reflections. When observing the students, she noted, for example, whether they reread the problem carefully, what information sources they referred to and, if they asked for help, if their request for help was an attempt to be given the solution or to get hints about how to generate their own solution. To follow up on her observations of each student, Sheila had a brief conversation based on the following questions:

- How did you know you were persisting?
- What was your thinking as you worked through the problem?
- What decisions did you make along the way?
- Can you tell me more about the decisions?
- How does your thinking and decision-making fit with your goal for persistence?

Sheila related each student's self-assessment to her observation notes and the student-developed criteria. She focussed on the student's own determination of which strategies increased his or her level of persistence and generated successful problem-solving, and how the student saw his or her level of persistence in comparison to her observations.

Sheila thought about how to ensure the validity of her interpretations of her students' persistence. She also needed to understand the validity of their interpretations. As time went on, Sheila recognized that, although her students had changed their level of persistence in approaching a complex problem, there remained a group of students who didn't seem to have a

good sense of their own persistence. A few of them thought they were persisting when, actually, they were simply skipping difficult questions or seeking help from peers without attempting to solve the problems on their own. Others thought they were not persisting enough, yet Sheila's notes showed that they were requesting hints only after they expended great effort and time. The majority of her students, however, were accurate in their estimation of their own persistence.

***How can I (and the students) use the information from this assessment?***

*By understanding and valuing the students' thinking, I can scaffold their growth and provide direction for further developing the habits of mind that will promote persistence in any learning situation. (Students will be able to use their increased awareness of their own persistence and skills to enhance their learning in various contexts.)*

Based on what they learned from their self-assessments and Sheila's observations, the students reviewed what persistence in solving problems looks like. Together they revised and refined their criteria.

Sheila arranged the students in pairs: one who was proficient at monitoring his or her own persistence, and the other who was still moving toward this awareness. Over the next several weeks, the pairs were called upon periodically to use their criteria to review their persistence in whatever activity they were engaged in. Over the course of the year, the students became their own best assessors, learning with increasing independence to monitor, adjust, and take charge of their own learning.

# Summary of Planning Assessment *as* Learning

| | Assessment *for* Learning | Assessment *as* Learning |
|---|---|---|
| **Why Assess?** | to enable teachers to determine next steps in advancing student learning | to guide and provide opportunities for each student to monitor and critically reflect on his or her learning and identify next steps |
| **Assess What?** | each student's progress and learning needs in relation to the curricular outcomes | each student's thinking about his or her learning, what strategies he or she uses to support or challenge that learning, and the mechanisms he or she uses to adjust and advance his or her learning |
| **What Methods?** | a range of methods in different modes that make students' skills and understanding visible | a range of methods in different modes that elicit students' learning and metacognitive processes |
| **Ensuring Quality** | • accuracy and consistency of observations and interpretations of student learning<br>• clear, detailed learning expectations<br>• accurate, detailed notes for descriptive feedback to each student | • accuracy and consistency of student's self-reflection, self-monitoring, and self-adjustment<br>• engagement of the student in considering and challenging his or her thinking<br>• students record their own learning |
| **Using the Information** | • provide each student with accurate descriptive feedback to further his or her learning<br>• differentiate instruction by continually checking where each student is in relation to the curricular outcomes<br>• provide parents or guardians with descriptive feedback about student learning and ideas for support | • provide each student with accurate, descriptive feedback that will help him or her develop independent learning habits<br>• have each student focus on the task and his or her learning (not on getting the right answer)<br>• provide each student with ideas for adjusting, rethinking, and articulating his or her learning<br>• provide the conditions for the teacher and student to discuss alternatives<br>• students report about their learning |

# Chapter 5

# Assessment *of* Learning

*Reflection:*

*Think about an example of assessment* ***of*** *learning in your own teaching and try to develop it further as you read this chapter.*

## What Is Assessment *of* Learning?

Assessment *of* learning refers to strategies designed to confirm what students know, demonstrate whether or not they have met curriculum outcomes or the goals of their individualized programs, or to certify proficiency and make decisions about students' future programs or placements. It is designed to provide evidence of achievement to parents, other educators, the students themselves, and sometimes to outside groups (e.g., employers, other educational institutions).

> The purpose of assessment that typically comes at the end of a course or unit of instruction is to determine the extent to which the instructional goals have been achieved and for grading or certification of student achievement.
>
> (Linn and Gronlund, ***Measurement and Assessment in Teaching***)

Assessment *of* learning is the assessment that becomes public and results in statements or symbols about how well students are learning. It often contributes to pivotal decisions that will affect students' futures. It is important, then, that the underlying logic and measurement of assessment *of* learning be credible and defensible.

## Teachers' Roles in Assessment *of* Learning

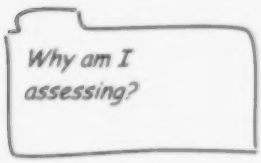
Because the consequences of assessment *of* learning are often far-reaching and affect students seriously, teachers have the responsibility of reporting student learning accurately and fairly, based on evidence obtained from a variety of contexts and applications. Effective assessment *of* learning requires that teachers provide

- a rationale for undertaking a particular assessment *of* learning at a particular point in time
- clear descriptions of the intended learning
- processes that make it possible for students to demonstrate their competence and skill
- a range of alternative mechanisms for assessing the same outcomes
- public and defensible reference points for making judgements

- transparent approaches to interpretation
- descriptions of the assessment process
- strategies for recourse in the event of disagreement about the decisions

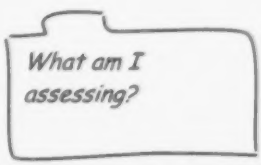
With the help of their teachers, students can look forward to assessment *of* learning tasks as occasions to show their competence, as well as the depth and breadth of their learning.

## Planning Assessment *of* Learning




The purpose of assessment *of* learning is to measure, certify, and report the level of students' learning, so that reasonable decisions can be made about students. There are many potential users of the information:

- teachers (who can use the information to communicate with parents about their children's proficiency and progress)
- parents and students (who can use the results for making educational and vocational decisions)
- potential employers and post-secondary institutions (who can use the information to make decisions about hiring or acceptance)
- principals, district or divisional administrators, and teachers (who can use the information to review and revise programming)




Assessment *of* learning requires the collection and interpretation of information about students' accomplishments in important curricular areas, in ways that represent the nature and complexity of the intended learning. Because genuine learning for understanding is much more than just recognition or recall of facts or algorithms, assessment *of* learning tasks need to enable students to show the complexity of their understanding. Students need to be able to apply key concepts, knowledge, skills, and attitudes in ways that are authentic and consistent with current thinking in the knowledge domain.

*What assessment method should I use?*

In assessment *of* learning, the methods chosen need to address the intended curriculum outcomes and the continuum of learning that is required to reach the outcomes. The methods must allow all students to show their understanding and produce sufficient information to support credible and defensible statements about the nature and quality of their learning, so that others can use the results in appropriate ways.

Assessment *of* learning methods include not only tests and examinations, but also a rich variety of products and demonstrations of learning—portfolios, exhibitions, performances, presentations, simulations, multimedia projects, and a variety of other written, oral, and visual methods (see Fig. 2.2, Assessment Tool Kit, page 17).

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**Graduation Portfolios**

Graduation portfolios are a requirement for graduation from British Columbia and Yukon Senior Years schools. These portfolios comprise collections (electronic or printed) of evidence of students' accomplishments at school, home, and in the community, including demonstrations of their competence in skills that are not measured in examinations.

Worth four credits toward graduation, the portfolios begin in Grade 10 and are completed by the end of Grade 12. The following are some goals of graduation portfolios:

- Students will adopt an active and reflective role in planning, managing, and assessing their learning.
- Students will demonstrate learning that complements intellectual development and course-based learning.
- Students will plan for successful transitions beyond Grade 12.

Graduation portfolios are prepared at the school level and are based on specific Ministry criteria and standards. Students use the criteria and standards as guides for planning, collecting, and presenting their evidence, and for self-assessing. Teachers use the criteria and standards to assess student evidence and assign marks.

There are three major components of a graduation portfolio:

1. Portfolio Core (30 percent of the mark). Students must complete requirements in the following six portfolio organizers: arts and design (respond to an art, performance, or design work); community involvement and responsibility (participate co-operatively and respectfully in a service activity); education and career planning (complete a graduation transition plan); employability skills (complete 30 hours of work or volunteer experience); information technology (use information technology skills); personal health (complete 80 hours of moderate to intense physical activity).
2. Portfolio Choice (50 percent of the mark). Students expand on the above areas, choosing additional evidence of their achievements.
3. Portfolio Presentation (20 percent of the mark). Students celebrate their learning and reflect at the end of the portfolio process.

(***Portfolio Assessment and Focus Areas: A Program Guide***)

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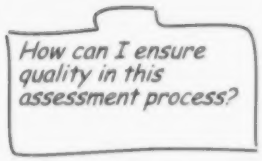


Assessment *of* learning needs to be very carefully constructed so that the information upon which decisions are made is of the highest quality. Assessment *of* learning is designed to be summative, and to produce defensible and accurate descriptions of student competence in relation to defined outcomes and, occasionally, in relation to other students' assessment results. Certification of students' proficiency should be based on a rigorous, reliable, valid, and equitable process of assessment and evaluation.

### *Reliability*

Reliability in assessment *of* learning depends on how accurate, consistent, fair, and free from bias and distortion the assessment is. Teachers might ask themselves:

- Do I have enough information about the learning of this particular student to make a definitive statement?
- Was the information collected in a way that gives all students an equal chance to show their learning?
- Would another teacher arrive at the same conclusion?
- Would I make the same decision if I considered this information at another time or in another way?

### *Reference Points*

Typically, the reference points for assessment *of* learning are the learning outcomes as identified in the curriculum that make up the course of study. Assessment tasks include measures of these learning outcomes, and a student's performance is interpreted and reported in relation to these learning outcomes.

In some situations where selection decisions need to be made for limited positions (e.g., university entrance, scholarships, employment opportunities), assessment of learning results are used to rank students. In such norm-referenced situations, what is being measured needs to be clear, and the way it is being measured needs to be transparent to anyone who might use the assessment results.

### *Validity*

Because assessment *of* learning results in statements about students' proficiency in wide areas of study, assessment *of* learning tasks must reflect the key knowledge, concepts, skills, and dispositions set out in the curriculum, and the statements and inferences that emerge must be upheld by the evidence collected.

### *Record-Keeping*

Whichever approaches teachers choose for assessment *of* learning, it is their records that provide details about the quality of the measurement. Detailed records of the various components of the assessment *of* learning are essential, with a description of what each component measures, with what accuracy and against what criteria and reference points, and should include supporting evidence related to the outcomes as justification.

**Resource:**
*Marzano, Transforming Classroom Grading*

When teachers keep records that are detailed and descriptive, they are in an excellent position to provide meaningful reports to parents and others. Merely a symbolic representation of a student's accomplishments (e.g., a letter grade or percentage) is inadequate. Reports to parents and others should identify the intended learning that the report covers, the assessment methods used to gather the supporting information, and the criteria used to make the judgement.

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**Guidelines for Grading**

1. Use curriculum learning outcomes or some clustering of these (e.g., strands) as the basis for grading.
2. Make sure that the meaning of grades comes from clear descriptions of curriculum outcomes and standards. If students achieve the outcome, they get the grade. (NO bell curves!)
3. Base grades only on individual achievement of the targeted learning outcomes. Report effort, participation, and attitude, for example, separately, unless they are a stated curriculum outcome. Any penalties (e.g., for late work, absences), if used, should not distort achievement or motivation.
4. Sample student performance using a variety of methods. Do not include all assessments in grades. Provide ongoing feedback on formative performance using words, rubrics, or checklists, not grades.
5. Keep records in pencil so they can be updated easily to take into consideration more recent achievement. Provide second-chance assessment opportunities (or more). Students should receive the highest, most consistent mark, not an average mark for multiple opportunities.
6. Crunch numbers carefully, if at all. Consider using the median, mode, or statistical measures other than the mean. Weight components within the final grade to ensure that the intended importance is given to each learning outcome.
7. Make sure that each assessment meets quality standards (e.g., there should be clear targets, clear purpose, appropriate target-method match, appropriate sampling, and absence of bias and distortion) and is properly recorded and maintained (e.g., in portfolios, at conferences, on tracking sheets).
8. Discuss and involve students in grading at the beginning and throughout the teaching and learning process.

(Adapted from O'Connor, ***How to Grade for Learning***)

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*How can I use the information from this assessment?*

### *Feedback to Students*

Because assessment *of* learning comes most often at the end of a unit or learning cycle, feedback to students has a less obvious effect on student learning than assessment *for* learning and assessment *as* learning. Nevertheless, students do

rely on their marks and on teachers' comments as indicators of their level of success, and to make decisions about their future learning endeavours.

### *Differentiating Learning*

In assessment *of* learning, differentiation occurs in the assessment itself. It would make little sense to ask a near-sighted person to demonstrate driving proficiency without glasses. When the driver uses glasses, it is possible for the examiner to get an accurate picture of the driver's ability, and to certify him or her as proficient. In much the same way, differentiation in assessment *of* learning requires that the necessary accommodations be in place that allow students to make the particular learning visible. Multiple forms of assessment offer multiple pathways for making student learning transparent to the teacher. A particular curriculum outcome requirement, such as an understanding of the social studies notion of conflict, for example, might be demonstrated through visual, oral, dramatic, or written representations. As long as writing were not an explicit component of the outcome, students who have difficulties with written language, for example, would then have the same opportunity to demonstrate their learning as other students.

Although assessment *of* learning does not always lead teachers to differentiate instruction or resources, it has a profound effect on the placement and promotion of students and, consequently, on the nature and differentiation of the future instruction and programming that students receive. Therefore, assessment results need to be accurate and detailed enough to allow for wise recommendations.

### *Reporting*

*Reflection:*

*What forms do your reports of student proficiency take? How do these differ according to audience?*

There are many possible approaches to reporting student proficiency. Reporting assessment *of* learning needs to be appropriate for the audiences for whom it is intended, and should provide all of the information necessary for them to make reasoned decisions. Regardless of the form of the reporting, however, it should be honest, fair, and provide sufficient detail and contextual information so that it can be clearly understood. Traditional reporting, which relies only on a student's average score, provides little information about that student's skill development or knowledge. One alternate mechanism, which recognizes many forms of success and provides a profile of a student's level of performance on an emergent-proficient continuum, is the parent-student-teacher conference. This forum provides parents with a great deal of information, and reinforces students' responsibility for their learning.

**The Communication System Continuum: From Symbols to Conversations**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Grades | Report cards (grades and brief comments) | Infrequent informal communications | Parent-teacher interviews | Report cards with expanded comments | Frequent informal communication | Student-involved conferencing | Student-led conferencing |

(O'Connor, ***How to Grade for Learning***)

## An Example of Assessment *of* Learning

Elijah was interested in assessing student mastery of both the modern and the traditional skills required for survival in the Nunavut environment where he teaches. The overarching theme of survival is taught in the early grades and culminates at the senior level in a course delivered in Inuktitut. Students learn how to take care of themselves and others, and how to adapt what they know to the situation at hand. Survival requires not only skills and knowledge, but also a concept the Inuit people call *qumiutit*, or the ability in an emergency situation to pull out of stored memory information that will enable a person to cope, not panic. Traditionally, this was learned in a holistic manner, grounded in Inuit traditional guiding principles that were nurtured and developed from birth, and taught and reinforced in daily living.

Throughout the term, Elijah took his students to an outdoor area to practise on-the-land survival activities, using both traditional and modern methods. He always took with him a knowledgeable Elder who could give the students the information they needed to store away in case of emergency. The students watched demonstrations of a skill a number of times. Each student then practised on his or her own, as Elijah and the Elder observed and assisted.

***Why am I assessing?***

*I want to know which survival skills each student has mastered and their readiness to survive in the natural environment.*

Elijah knew that students need to have a high level of expertise in the survival skills appropriate for the northern natural environment.

***What am I assessing?***

*I am assessing each student's performance of traditional and modern survival skills.*

Elijah assessed each student on each survival skill (e.g., making fire the traditional way, tying the knots required for the *qamutik* cross-pieces on a sled).

***What assessment method should I use?***

*I need an approach in which students can demonstrate the traditional survival skills that they learned. The method I choose should also allow me to identify which skills they did not master.*

Elijah knew that the best way to determine if students have mastered the skills is to have them perform them. When students believed they were ready, Elijah created an opportunity for them to demonstrate the mastered skill to a group of Elders, who then (individually, then in consensus) determined if the performance was satisfactory.

***How can I ensure quality in this assessment process?***

*Ensuring quality with this approach involves clear criteria: either the student performs the skill successfully or does not.*
*I need to provide adequate opportunities for the student to demonstrate the skills under various conditions and at various times.*

A student's competence in a survival skill is often demonstrated by an end product. For example, competence in knot tying is demonstrated by a knot that serves its purpose, and competence in fire building is demonstrated by a fire that is robust.

***How can I use the information from this assessment?***

*Now that I know which skills each of the students has mastered, I can report this information to the students and their parents. I can use this information to identify a learning path for each student.*

As the Elders judged each student's performance of the skills, Elijah recorded the results. He shared the information with each student and his or her parents in a final report, as shown here.

**Report on Survival Skills**

Student: _____ Date: _____

| Traditional Survival Skills | Modern Survival Skills | Adaptability to the Seasons | Attitude | Success | Next Steps |
|---|---|---|---|---|---|
| **1) Skills** | | | | | |
| Building a fire / means of keeping warm: | | | | | |
| • fuel sources<br>• getting a spark | • propane heaters, stoves<br>• clothing | | | | |
| Shelters: | | | | | |
| • emergency shelters<br>• igloo building[4]<br>• qamaq[5] | • tents | | | | |
| Transportation needs: | | | | | |
| • making the knots required for the qamutik cross pieces on a sled<br>• building a kayak/umiak | • fixing a snowmobile (spark plugs, repairing track, drive belt)<br>• keeping a boat seaworthy | | | | |
| Navigational issues: | | | | | |
| • reading the land<br>• reading the sky<br>• understanding seasonal variations<br>• reading inuksuit | • using GPS<br>• map reading | | | | |
| Preparation for land travel: | | | | | |
| • packing a qamutiq (sled)<br>• load, balance<br>• necessities: snow knife, rope, food, water, heat source | • letting others know where you are going<br>• necessary tools, supplies, snowmobile parts, fuel<br>• using communication devices | | | | |
| Food sources: | | | | | |
| • plants and their nutritional properties<br>• hunting, skinning, and cutting up seal, caribou, etc. | • kinds of food to take on the land, and their nutritional properties | | | | |
| **2) Relationship to the Seasons** | | | | | |
| Assessing conditions / recognizing danger signs:<br>• seasonal changes<br>• land changes<br>• water changes<br>• wind changes<br>• weather changes | Climatic changes:<br>• weather changes and how this affects the land and water<br>• knowledge of animals and their characteristics and behaviours | | | | |
| **3) Attitudinal Influences (Having the right attitude to learn)** | | | | | |
| • respect for the environment (cleaning up a campsite upon leaving, dealing with the remains of an animal, not over-hunting/fishing)<br>• respect for Elders and their knowledge<br>• ability to learn from Elders | | | | | |

4. Expertise in igloo building includes understanding of types of snow, the shape and fit of blocks, and the use of a snow-knife.
5. A qamaq is a rounded house, built of scrap wood or bones, and covered with skins, cardboard, or canvas.

Elijah's report identified which of the students had mastered the specified skills required to survive in the Nunavut environment. It outlined other areas (such as adaptability to the seasons and attitudinal influences) about which peers, parents, and family members would need to provide input before a comprehensive assessment could be made. The assessment also identified those students not yet ready to survive in the natural environment. But the Elders did not stop working with the students who did not reach mastery. Elders see learning as an individual path in which skills, knowledge, and attitudes are acquired along the way. If a particular skill was beyond the capability of a student, the Elders identified other areas where that person could contribute to the common good of the community, and was accepted for the gifts he or she brought to the group. In this way, the Elders helped Elijah differentiate the learning path for each of his students.

# Summary of Planning Assessment *of* Learning

| | Assessment *for* Learning | Assessment *as* Learning | Assessment *of* Learning |
|---|---|---|---|
| **Why Assess?** | to enable teachers to determine next steps in advancing student learning | to guide and provide opportunities for each student to monitor and critically reflect on his or her learning, and identify next steps | to certify or inform parents or others of student's proficiency in relation to curriculum learning outcomes |
| **Assess What?** | each student's progress and learning needs in relation to the curricular outcomes | each student's thinking about his or her learning, what strategies he or she uses to support or challenge that learning, and the mechanisms he or she uses to adjust and advance his or her learning | the extent to which students can apply the key concepts, knowledge, skills, and attitudes related to the curricular outcomes |
| **What Methods?** | a range of methods in different modes that make students' skills and understanding visible | a range of methods in different modes that elicit students' learning and metacognitive processes | a range of methods in different modes that assess both product and process |
| **Ensuring Quality** | • accuracy and consistency of observations and interpretations of student learning<br>• clear, detailed learning expectations<br>• accurate, detailed notes for descriptive feedback to each student | • accuracy and consistency of student's self-reflection, self-monitoring, and self-adjustment<br>• engagement of the student in considering and challenging his or her thinking<br>• students record their own learning | • accuracy, consistency, and fairness of judgements based on high-quality information<br>• clear, detailed learning expectations<br>• fair and accurate summative reporting |
| **Using the Information** | • provide each student with accurate descriptive feedback to further his or her learning<br>• differentiate instruction by continually checking where each student is in relation to the curricular outcomes<br>• provide parents or guardians with descriptive feedback about student learning and ideas for support | • provide each student with accurate descriptive feedback that will help him or her develop independent learning habits<br>• have each student focus on the task and his or her learning (not on getting the right answer)<br>• provide each student with ideas for adjusting, rethinking, and articulating his or her learning<br>• provide the conditions for the teacher and student to discuss alternatives<br>• students report about their learning | • indicate each student's level of learning<br>• provide the foundation for discussions on placement or promotion<br>• report fair, accurate, and detailed information that can be used to decide the next steps in a student's learning |

# Next Steps

Section III

The focus on the purposes of assessment, and the process of making assessment *for* learning, assessment *as* learning, and assessment *of* learning distinct and identifiable parts of the teaching and learning process, is one of the most significant changes to occur in education. It represents a major shift in thinking toward assessment as a key contributor to enhancing learning for all students. It requires changes in the mindsets of educators, students, parents, and society.

## Key Ideas in Section III

- Shifting and balancing assessment purposes requires changes in habits of mind.
- Embedding and sustaining habits of mind requires professional learning.
- Building the capacity for rethinking and changing assessment requires systematic planning and implementation.
- WNCP jurisdictions have many structures and resources already in place that can be mobilized for changing assessment practices.

# Chapter 6

# Embedding and Sustaining Purposeful Classroom Assessment

> Learning is the imperative to equip future generations to respond and to survive in a frenetically and unpredictably changing world. The challenge for educators is to engage in new learning themselves in order to help students deal with the opportunities and stresses of shifting and unpredictable social forces on their lives.
>
> (Stoll, Fink, and Earl, ***It's about Learning [and It's about Time]: What's in it for Schools?***)

Although many innovations have been introduced to educational systems, few have had a fundamental effect on what happens in classrooms. Change requires learning. Nothing can really change in schools unless teachers and administrators have learned new knowledge and skills, and are able to transfer that learning to the classroom.

Thinking about assessment as a major facilitator of learning is likely to be one of the most significant changes in classroom practice. This change will challenge many educators' fundamental beliefs about their work and about education, and it will require of them new knowledge and skills.

This document provides a framework and direction for teachers, administrators, and professional developers as they work together to make fundamental changes in classroom assessment practices. It does not offer "quick fixes." This chapter offers ideas about what is needed to change and sustain assessment practices that differentiate learning for all students. Because assessment is intertwined with other dimensions of schooling, it is not possible to change one without changing the others. Significant changes in assessment will involve not only educators, but also parents and members of the wider community.

The success of embedding and sustaining any serious alteration to classroom practice depends on changes in the hearts and minds of individual teachers, administrators, and district or division leaders. Critical elements in the process are understanding and motivation to engage in the change, access to professional development to build the necessary capacity, support from local leadership, work environments that have capacity for continuous change and adjustment, and the support of the wider community.

## Understanding and Motivation

Changing practices requires deep understanding on the part of educators. Looking beyond immediate action, and into the reasons for the change and the subtle differences between the old and the new is essential. For most people, the approach to processing new information is conservative, in that human beings are inclined to preserve existing beliefs and habits rather than transform them or construct new ones. We tend to assimilate new information into our current knowledge structures, rather than create new structures to fit the new information. We may integrate information into our comfort zones, and feel we are practising the innovation. But we may not have fully understood the innovation, and so have not made the intended changes.

> Change is evolutionary, not revolutionary; persistence is essential, and patience is a virtue. There is no "there" in the educational change process. What matters is "getting there," in fact to lots of "theres." Educational change is, fundamentally, the accumulation of small ongoing improvements that are rooted in deep understanding on the part of teachers and motivated by deep understanding on the part of students. A journey worth taking.
>
> (Earl, ***The Paradox of Hope: Educating Young Adolescents***)

Alternative assessment techniques have been part of the educational landscape for several decades, and, although many of them seem to have been adopted, significant changes in classroom assessment purposes have not been evident. In addition to having access to a collection of assessment tools, teachers require time to actively think about existing practices, decide what is different, and make conscious adaptations and innovations.

The shift from doing to thinking about assessment can be difficult. Doing feels productive. Doing suggests that there is progress and that the change will soon be established. But just going through the motions is not enough. It may, in fact, be counterproductive.

Changing assessment practices is not just intellectual work; indeed, assessment has an inherent emotional component that impacts on motivation. Consider, for example:

- Assessment *for* learning is premised on a belief that all students are capable of learning the intended curriculum, and that teachers have the requisite content knowledge and the pedagogical skills to find ways to facilitate students' learning. If a teacher does not hold this view, he or she may feel conflicted and may focus negatively on why it can't work.
- Assessment *as* learning requires reconceptualizing not just assessment, but teaching and learning as well. Assessment as learning means giving up the more traditional constructs of transmitting knowledge, "managing" classrooms, and maintaining control, and instead redistributing responsibilities in classrooms. This major shift in approach (and consequently in the student-teacher power arrangements) can produce a sense of disequilibrium and dissonance.

- Thinking about the quality concerns in assessment *of* learning brings past practices into question, and may indicate the need for new ways of doing things.

Each teacher will receive and respond to changes in classroom assessment practices from his or her own history, background, and experiences. These need to be drawn out, clarified, and investigated as part of any new learning.

It is important to understand that dissonance is a necessary part of change. Teachers who are making changes in their understanding of assessment, and learning new ways of assessing, are at the same time revisiting their views about how children learn and what role teachers play in supporting learning for every student. They are choosing to review, monitor, adapt, and reflect on their own effectiveness in the classroom. Indeed, these teachers are using the same processes as their students to become their own best assessors, and are following their own learning path.

## Capacity: Knowledge and Skills

> Capacity is a complex blend of motivation, skill, positive learning, organizational conditions and culture, and infrastructure of support. Put together, it gives individuals, groups and, ultimately, whole school communities the power to get involved in and sustain learning.
>
> (Stoll et al., ***Preparing for Change***)

Although many teachers have very large repertoires of assessment methods, they may need to revisit and enhance their knowledge and skills in identifying purpose, deciding what to assess, choosing methods, ensuring quality, interpreting evidence, and using the assessment for the intended purpose. The framework for planning assessment that was used throughout the three chapters in Section II provides teachers with a template for this process (see Appendix 1 for a blank template). Changing classroom assessment depends on teachers building repertoires of knowledge of learning theories, content knowledge, and pedagogical knowledge.

### *Learning Theory*

Research in the past few decades has fundamentally transformed what is known about how people learn. In order for teachers to use assessment to enhance

**Powerful Insights about How People Learn**

1) People come to learning with preconceptions about how the world works. If their initial understanding is not engaged, they may fail to grasp the new concepts and information that are taught or may learn them superficially and revert to their preconceptions in real situations.
2) To develop competence in an area of inquiry, people must
   - have a deep foundation of factual knowledge
   - understand facts and ideas in the context of a conceptual framework
   - organize knowledge in ways that facilitate retrieval and application
3) A "metacognitive" approach to instruction can help people learn to take control of their own learning by defining learning goals and monitoring their own progress in achieving them.

(National Research Council, ***How People Learn: Bridging Research and Practice***)

learning, they need an understanding of how people learn, as well as a focus on effective tools of assessment and teaching.

### *Curriculum and Subject Content*

An important aspect of changing assessment to focus on learning is teachers being knowledgeable about the curriculum specific to the subject areas that they teach and the ways that people learn and master specific material. It is also important to be aware of the various misconceptions that students can bring to a subject, and the views that led them to their misconceptions. With this knowledge, teachers can provide useful descriptive feedback and create tasks that not only challenge students' existing beliefs, but also offer new ones that will advance their learning.

### *Pedagogy and Differentiating Learning*

Attending to the purposes of assessment, and putting the emphasis on assessment *for* learning and assessment *as* learning, directs differentiating instruction for all students. When teachers have considerable expertise in tailoring pedagogical practice, they are in a good position to address the needs of groups and individuals. They can plan some learning contexts that are the same for all students, some for groups of students, and some for individuals. They can draw on a wide range of resources, activities, and strategies to engage students in their own learning, scaffold their learning along the way, and provide experiences that give students lots of practice and support. Their plans will provide the blueprint that they and their students can use to constantly identify the intentions, make the connections explicit, reinforce the relationships, and identify the misconceptions that can get in the way. Assessment is then the key to making on-the-spot modifications, or, if need be, proceeding in another direction.

## Leadership

**Resource:**
Gregory and Kuzmich, *Data-Driven Differentiation in the Standards-Based Classroom*

Even when high-quality professional development and communities of practice are in place, changes will not occur unless there is also strong instructional leadership and creative management on the part of school administrators. Administrators have the responsibility for creating the conditions necessary for growth in teachers' professional knowledge. They require a thorough understanding of the theories and the practices of classroom assessment, so that they can effectively examine and modify school policies, help prioritize teachers' time, allocate funding, monitor changing practices, and create a culture within the school that allows teachers to feel safe as they challenge their own beliefs, and change their practices.

## School and Community Support for Change

Because schooling is a strong and important pillar of each community, whenever any practices or policies in schools change it is important that the public understand the reasons for the changes, what the changes look like in practice, and the consequences of the changes. Assessment is the "public face" of education, and changes need to be shared with all who are affected.

Students comprise the first and most important group that needs to understand the changes being made. When students come to understand that the primary goal in the assessment process is learning (through assessment *for* learning and assessment *as* learning) and that the teacher is there to help them, they begin to trust that learning is not a competition, but rather the pursuit of a series of challenges that result in a sense of worthwhile achievement. When they eventually face assessment *of* learning conditions, students are likely to be competent and confident.

Parents comprise another group that needs to understand the changes that are being made. Assessment and evaluation have traditionally been viewed as private, mysterious activities, often accompanied by a sense of foreboding. Shifting parents' perceptions, and winning their support, will take a concerted effort.

New Zealand research shows that teachers and their curriculum leaders who work together to examine the implications of evidence of student achievement for their teaching had higher-achieving students. These teachers were involved in "learning conversations" based on a consideration of students' work to help them reflect on how they might teach more effectively. One teacher described the process like this: "When you look at the assessments, you can identify where you are with your children. You can see where your hot spots are. It's the sharing amongst the teachers. When you have a problem you just put it on the table and we all try to figure out what to do. Maybe others are teaching it differently, and you know these little bits help you. We all look forward now to actually sharing our results so we can figure out how to get it right for those children."

(Timperley and Wiseman, ***The Sustainability of Professional Development in Literacy***)

A third group that needs to understand the changes is the general public. It is important that they come to understand the purposes of assessment, and see how clarifying and separating the purposes can contribute to better decisions for all students and for society as a whole.

## Nurturing Inquiry Habits of Mind

If teachers are to support students' efforts at becoming lifelong learners who are capable of meeting the challenges of a complex and constantly changing society, it is important that they, as well as their students,

- think and work with a mindset of being in charge of their own destinies, always hungry to know more
- value deep understanding
- reserve judgement and maintain a tolerance for ambiguity
- think about a range of perspectives while systematically posing increasingly focussed questions

# Chapter 7

# Building Capacity for Enhancing Classroom Assessment

This chapter provides examples of strategies, structures, and processes that individuals and groups in schools, districts, educational associations, provinces, and territories can use for building the necessary capacity to embed and sustain changes to classroom assessment. Each jurisdiction will have to decide how to integrate rethinking classroom assessment into its other capacity-building endeavours. The examples provided here are just a beginning. As educators rethink their classroom assessment, they will develop many more examples.

> Capacity-building is creating and maintaining the necessary conditions, culture, and structures that facilitate learning and skill-oriented experiences and opportunities, ensuring interrelationships and synergy between all the component parts.
> (Stoll and Bolam, ***Leadership in Communities***)

## Professional Learning

Deep learning and its application in practice requires more than just attending workshops and courses. Effective professional development is not simply a uniform delivery of information to teachers, but takes into account teachers' diverse backgrounds and the diverse contexts in which they work. Teachers themselves have a responsibility of acquiring pedagogical knowledge and disseminating it to others through networking. Professional learning can be formal (as in in-service and professional development sessions and professional growth planning), and it can be informal (as in close daily attention to classroom assessment practices). It can occur in initial

> A professional community of learners is one in which the teachers in a school and its administrators continuously seek and share learning and act on their learning. The goal of their actions is to enhance their effectiveness as professionals for the students' benefit; this arrangement may also be termed ***communities of continuous inquiry and improvement.***
> (Hord, ***Professional Learning Communities: Communities of Continuous Inquiry and Improvement***)

teacher training or throughout teachers' careers. It can happen individually or collectively.

Some examples of strategies for building capacity through professional learning follow.

***Assessment Study Groups.*** In a study group that is focussed on changing classroom assessment, teachers read about, study, talk about, observe, debate, and implement changes to assessment practices. They work together to extend what they do, to systematically monitor and make changes based on what they learn.

**Yukon Teacher Collaboration Teams**

The Yukon has instituted a number of collaboration teams that are made up of teachers with various levels of teaching experience, and whose task it is to share their experiences and to visit each others' classrooms. Their goals are to

- provide collegial support to fellow teachers and exchange educational knowledge and ideas, especially for those who are in difficult teaching situations
- provide support to teachers new to the Yukon and to the teaching profession
- facilitate connections teachers make with other teachers in similar teaching environments
- help prevent teacher burnout and its effects on students
- reduce the frequency of transfer of teachers among schools and out of the teaching profession
- help teachers institute changes in their teaching styles and apply new learning from books or in-services
- provide teachers with the opportunity to visit other classrooms and schools in the Yukon

***Assessment Learning Walks.*** During learning walks, teachers visit one anothers' classrooms and schools to observe assessment in action, discuss assessment approaches, share resources, consider student work, and plan changes to their assessment practices.

***Assessment Plans.*** A template for planning assessment, such as the one found in Appendix 1, is a valuable tool for shaping thinking about assessment practices and formulating new ones. Teachers can use this process to plan assessment in conjunction with their planning for instruction.

***Assessment Collaborations.*** When teachers work together to consider the work that students have produced or to listen to students' presentations, they bring to this exercise the collective wisdom of all of the people in the group. More minds result in more reliable determinations of what students understand. Teachers can work together to develop a range of strategies for helping each student move forward.

**Resource:**
Little et al., "Looking at Student Work for Teacher Learning, Teacher Community, and School Reform"

***Assessment Action Research.*** When educators engage in action research they try out some new approaches to assessment, and they develop a process for recording their success or obstacles to success. They use what they learn to adjust their practices, and they share what they have learned with others.

***Electronic Assessment Conference or Bulletin Board.*** For some educators, it is not easy to have direct personal contact with colleagues. An electronic bulletin board or conference related to assessment allows them to ask one another questions, post examples, participate in discussions, and share ideas.

***Professional Reading and Writing about Assessment.*** There are many excellent books and articles about classroom assessment, some of which are noted in the margins and included in the resource list at the end of this document. Reading these resources and keeping professional journals creates an opportunity for educators to review their own assessment experiences, reflect on their students' assessment experiences, examine their assessment beliefs and practices, stimulate new ideas, chart their own learning about assessment, and apply what they have learned.

***Assessment Audits.*** Over the course of a term, teachers can keep detailed logs of their day-to-day assessment practices, including a description of the assessment and its purposes, how they have addressed issues of quality, and how they have used the assessment information. At the end of a term, teachers can review their logs and note what proportion of their assessment falls into each purpose, and they can determine changes that would improve the balance.

## Leadership and Support

The kinds of strategies for professional learning described above require leadership and support. Effective leadership in schools, districts, provinces, and territories will ensure that the necessary policies are in place to encourage and endorse a focus on rethinking classroom assessment with purpose in mind. The WNCP itself is an excellent example of a policy-support system that provides leadership and direction through various project initiatives, such as the one that gave rise to this document.

**Building a Culture of Collaboration**

In the Edmonton Catholic Schools District, the Assessment for Learning initiative has brought together administrators and teachers into school leadership teams. A recent study of the initiative, which included interviews with 60 participants, demonstrated that colleagues working together (in multi-faceted approaches such as study groups, intervisitations, team planning) build collaborative school cultures and that collaboration is a powerful catalyst in making a positive difference for students. A condition for the success of these teams is high expectations and a sense of responsibility for colleagues' learning. As one teacher explained, "There's some accountability that's created because we are helping each other and looking out for each others' learning. It's kind of the expectation that you're going to come along as well."

(Patterson and Rolheiser, "Creating a Culture of Change")

School and district leaders can do much to support teachers' continued development of their classroom assessment practices. In addition to providing access to the kinds of professional development strategies outlined above, there are a number of other possible strategies, including boundary-spanning activities, developing critical friendships, modelling, and making time.

***Using Boundary-Spanning Activities.*** Leaders can play a pivotal role in giving classroom assessment a high profile by ensuring that boundaries between individual classrooms and whole schools are permeable. In the short term, this might mean that every meeting agenda include an example of good practice, which could be as simple as requesting staff to bring along a piece of student work to share. In the long term, school staffs could develop school improvement

plans that include the school-wide goal of enhancing classroom assessment. These plans would include indicators that show evidence of change.

***Developing Critical Friendships.*** Critical friends offer support and honest, open critiques. When they have expertise in classroom assessment as well as sensitivity and the ability to listen and respond thoughtfully, critical friends can be an invaluable asset. They can observe what may not be apparent to insiders, facilitate reflection on classroom assessment practices, ask questions, and probe for justifications. They are not afraid to challenge assumptions, but they do it in a non-judgemental and helpful way. They also provide reminders of accomplishments. Leaders are well-placed to broker critical friendship interactions in their districts and beyond.

A critical friend is a trusted person who asks provocative questions, provides data to be examined through another lens, and offers critique of a person's work, as friend.

(Costa and Kallick, ***Assessment in the Learning Organization***)

***Modelling.*** One of the most powerful ways that leaders can support the new learning of others is by modelling. Leaders can model the behaviours, attitudes, and commitments that they ask others to demonstrate. Leaders who make their own professional learning about classroom assessment apparent can underscore the "do as I do, as well as do as I say" message. This message stands not only in terms of the process of continuous learning about classroom assessment, but also in terms of the content. Whether it is in the context of formal activities, like school improvement planning and working with professional growth plans, or in the informal, day-to-day, decisions that they are required to make, leaders draw on evidence to inform what happens next, to figure out how to best help others to help themselves, or to determine proficiency.

In more than 12 years of working with urban elementary schools on developing whole-school classroom practice, the University of Chicago's Center for School Improvement has found that little changes unless the principal is fully on board.

(Bryk et al., "Urban School Development: Literacy as a Lever for Change")

***Making Time.*** Educators often feel that they have little control over the way that time is allocated in school. The one commodity that they say they do not have enough of is time. Frustration about time is often expressed in relation to the feeling that one has to accomplish more than there is time for. However, the problem is not so much about lack of time but use of time. Rethinking classroom assessment is not about doing *more* but about doing *differently*. The challenge, as noted on the assessment pyramids shown in Fig. 2.1, is to bring balance to classroom assessment practices. Leaders can help teachers make the thinking time they need by supporting opportunity cost analyses (the idea that everything that gets done has a cost in terms of what doesn't get done), and the decisions that follow. Leaders can support teachers by endorsing and encouraging opportunities for assessments *for* and *as* learning as a basis for

The one commodity that teachers and administrators say they do not have enough of, even more so than money, is time: time to teach, time to converse, time to think, time to plan.

(Schlechty, ***Schools for the Twenty-First Century: Leadership Imperatives for Educational Reform***)

having students more involved in their learning and reporting about their learning.

> We must make choices and become increasingly ingenuous, and ingenious, in how we allocate scarce time.
>
> (Lafleur, "The Time of Our Lives: Learning from the Time Experiences of Teachers and Administrators during a Period of Educational Reform")

## Engaging Parents and Community

Intentionally creating a partnership is a useful way of engaging parents, students, and the community in the work of the school. Members of a partnership contribute mutually to reach goals, provide different perspectives on issues, offer support, and bring specific skills and strengths to the table. (The "letter home" example on page 35 and the example of student-led conferencing on page 49 show how partnerships can develop when assessment is not something that is done *to* students but rather something that is done *with* students, *for* students, and *by* students.) Some strategies for developing successful school-family-community partnerships with a classroom assessment focus include (adapted from Epstein, 2002):

> Unless children 'take the values home' and the community understands and shares the school's values, school improvement will flounder. Strategic work with the wider community is vitally important.
>
> (English National College for School Leadership, ***Making the Difference: Successful Leadership in Challenging Circumstances***)

***Workshopping with Parents.*** Provide workshops for parents to explain current classroom assessment practices, and to demonstrate how instruction is targeted and learning is supported.

***Communicating.*** Establish mechanisms for timely, two-way communication between home and school that celebrates student success and identifies areas of concern. For example, use a folder to send student work home each week, with a space for student reflections and parent comments.

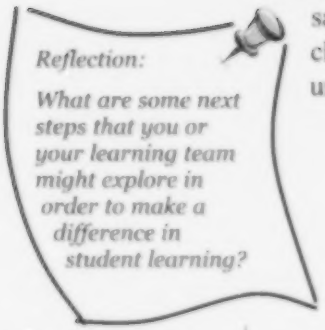
***Volunteering.*** Survey parents and community members about their interests, strengths, and availability, and develop a program for using the volunteers to support the differentiated learning needs of students as directed by classroom assessment practices.

***Learning at Home.*** Develop procedures that enable parents to monitor (and help students to monitor) homework, lend support, and give feedback to teachers, according to a set of outcomes-based criteria that teachers provide.

***Making Decisions.*** Encourage and facilitate active involvement by both parents and students in assessment-informed decisions that affect the student, such as charting next steps. Use assessment *as* learning opportunities to encourage students to talk explicitly about their own learning, and encourage others to do the same.

***Celebrating with the Community.*** Consider producing a video series for local cable networks that highlights the assessment work that is being done in your schools. It could include footage of the process that you are engaged in and of teachers, students, and parents in discussion about assessment *for* learning, assessment *as* learning, and assessment *of* learning.

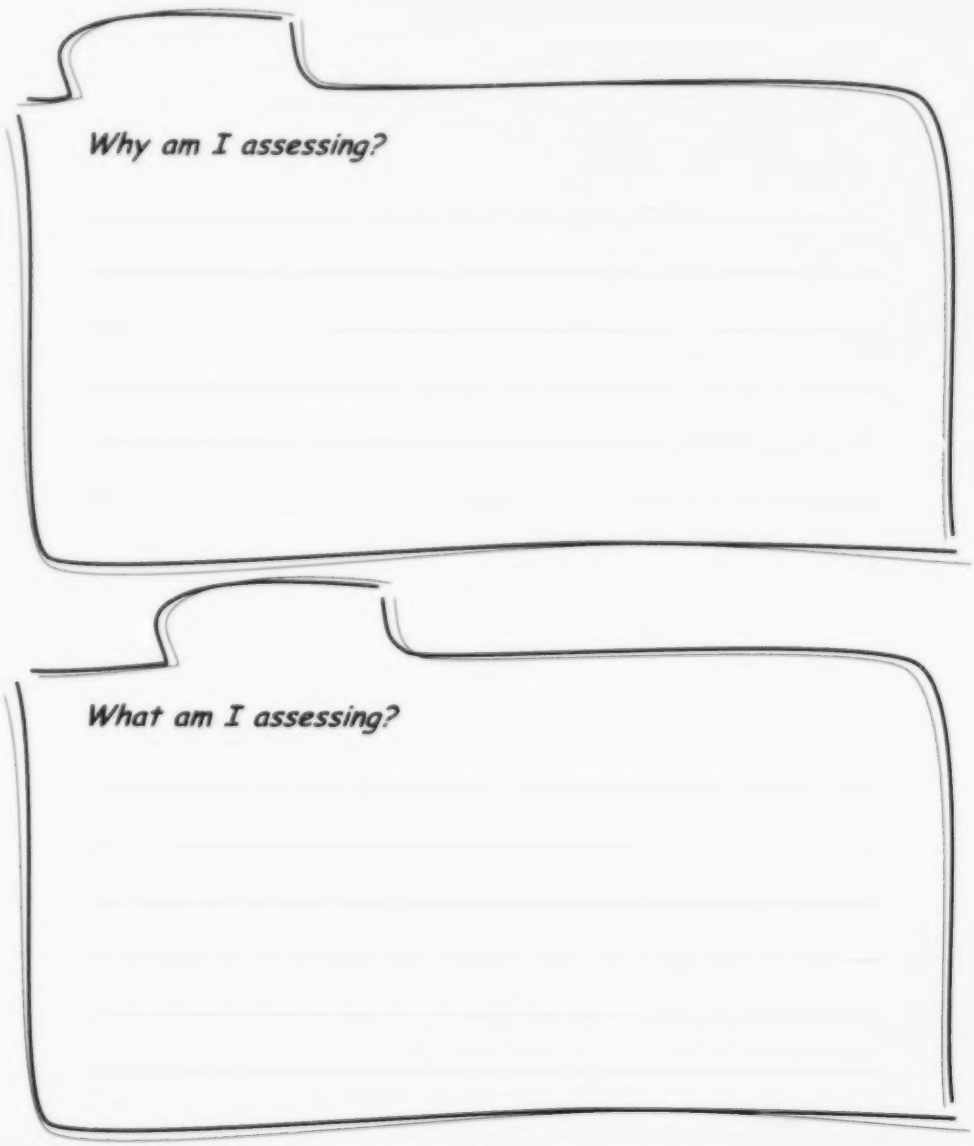
Rethinking classroom assessment may appear to be a daunting task. As teachers Christine and Paul discovered (see A Vignette of Assessment in Action, pages 18 to 26), focussed attention on assessment purposes and on the students in the class provide the starting point. However, we need to remember that teachers are not alone in making assessment a critical part of learning. As Margaret Mead once said, "Never doubt that a small group of thoughtful, committed citizens can change the world: indeed, it's the only thing that ever has." Nor should we underestimate the power of classroom assessment.


*Reflection:*
*What are some next steps that you or your learning team might explore in order to make a difference in student learning?*

# Appendices

## Appendix 1

# A Template for Planning Assessment



*What assessment method should I use?*

*How can I ensure quality in this assessment?*

*How can I use the information from this assessment?*

# Appendix 2

## Overview of Planning Assessment

This appendix provides a summary of the tables in Chapters 3, 4, and 5 (Section II) of this document.

| | Assessment *for* Learning | Assessment *as* Learning | Assessment *of* Learning |
|---|---|---|---|
| **Why Assess?** | to enable teachers to determine next steps in advancing student learning | to guide and provide opportunities for each student to monitor and critically reflect on his or her learning and identify next steps | to certify or inform parents or others of student's proficiency in relation to curriculum learning outcomes |
| **Assess What?** | each student's progress and learning needs in relation to the curricular outcomes | each student's thinking about his or her learning, what strategies he or she uses to support or challenge that learning, and the mechanisms he or she uses to adjust and advance his or her learning | the extent to which students can apply the key concepts, knowledge, skills, and attitudes related to the curriculum outcomes |
| **What Methods?** | a range of methods in different modes that make students' skills and understanding visible | a range of methods in different modes that elicit students' learning and metacognitive processes | a range of methods in different modes that assess both product and process |
| **Ensuring Quality** | • accuracy and consistency of observations and interpretations of student learning<br>• clear, detailed learning expectations<br>• accurate, detailed notes for descriptive feedback to each student | • accuracy and consistency of student's self-reflection, self-monitoring, and self-adjustment<br>• engagement of the student in considering and challenging his or her thinking<br>• students record their own learning | • accuracy, consistency, and fairness of judgements based on high-quality information<br>• clear, detailed learning expectations<br>• fair and accurate summative reporting |
| **Using the Information** | • provide each student with accurate descriptive feedback to further his or her learning<br>• differentiate instruction by continually checking where each student is in relation to the curricular outcomes<br>• provide parents or guardians with descriptive feedback about student learning and ideas for support | • provide each student with accurate, descriptive feedback that will help him or her develop independent learning habits<br>• have each student focus on the task and his or her learning (not on getting the right answer)<br>• provide each student with ideas for adjusting, rethinking, and articulating his or her learning<br>• provide the conditions for the teacher and student to discuss alternatives<br>• students report about their learning | • indicate each student's level of learning<br>• provide the foundation for discussions on placement or promotion<br>• report fair, accurate, and detailed information that can be used to decide the next steps in a student's learning |

# Resources for Further Reading

The following resources may be useful for teachers and administrators in their study and implementation of classroom assessment with purpose in mind. This list is not exhaustive. Instead, it includes examples of books, articles, materials, and web links that can be the starting point for individuals and groups to build their own personalized assessment resource compendia.


*Active Learning Practice for Schools: Teaching for Understanding.* <http://learnweb.harvard.edu/alps/tfu/index.cfm>

Airasian, P.W. *Assessment in the Classroom: A Concise Approach.* 2nd ed. New York, NY: McGraw-Hill, 1999.

*Alberta Assessment Consortium: Everyday Assessment Tools.* <http://www.aac.ab.ca/>

Alberta. 2003. *Classroom Assessment Toolkit: 1-6.* <http://www.learning.gov.ab.ca/k_12/curriculum/bySubject/ict/div1to4.pdf>

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Arter, J., and J. McTighe. *Scoring Rubrics in the Classroom.* Thousand Oaks, CA: Corwin, 2001.

Assessment Training Institute. Homepage. <http://www.assessmentinst.com>

Association of Assessment Inspectors and Advisors. 2000. Homepage. <www.rmplc.co.uk/orgs/aaia>

Black, P. *Testing: Friend or Foe?* Falmer Press: London, 1998.

Black, P., and D. William. "Inside the Black Box: Raising Standards through Classroom Assessment." *Phi Delta Kappan* 80.2 (1998): 139-148.

Black, P., and C. Harrison. "Feedback in Questioning and Marking: The Science Teacher's Role in Formative Assessment." *School Science Review* 82.301 (2001): 55-61.

Black, P., C. Harrison, C. Lee, B. Marshall, and D. Wiliam. *Assessment for Learning: Putting It into Practice.* Berkshire, UK: Open University Press, 2003.

Blythe, T., D. Allen, and P.B. Schieffelin. *Looking Together at Student Work: A Companion Guide to Assessing Student Learning.* New York, NY: Teachers' College Press, 1999.

British Columbia Ministry of Education. 1996; 27 January 1999. "Appendix D: Evaluation Example. Standards Department." <http://www.bced.gov.bc.ca/irp/physics/apdg12.htm>

---. 2004. *Classroom Assessment and Evaluation.* <http://www.bced.gov.bc.ca/classroom_assessment/class_assess.htm>

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